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THE EDUCATION OF EXCEPTIONAL CHILDREN

INTRODUCTION

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California State Department of Education*

California schools have long recognized the principle that equal educational opportunity should be within reach of all its children and youth. For a number of years the public schools have been attempting to provide the services necessary to make equality of educational opportunity a reality for pupils who deviate significantly in mental, physical, social and emotional growth or condition. Because of the problems inherent in the establishment of special education programs for certain types of exceptional children—such as the blind, the cerebral palsied, and the deaf, who represent a relatively small per cent of the total school population—such programs were until recently confined to the highly populated and wealthy school districts.

Scrutiny of the programs of special education in California in 1947, when the Bureau of Special Education was organized as a unit of the Division of Instruction of the State Department of Education, indicated that only a small per cent of the total number of handicapped children of school age were receiving services necessary to afford them opportunity to develop to the fullest all their capacities and interests. Many of them were receiving no educational opportunities whatever. Conferences with local school administrators regarding this gap in California's educational program revealed in most instances a sincere desire to remedy the situation and willingness to abide by legal requirements making mandatory the provision of special education for the physically and mentally handicapped. However, numerous problems were reported which prevented the carrying out of these responsibilities to exceptional children.

Certain of these problems, which appeared to be seriously retarding growth of educational opportunities for that segment of the school population for which special legislation had already been enacted—namely, the physically and mentally handicapped—were selected for emphasis by the Bureau. Those problems and the results of four and one-half years of effort to solve them may be summarized as follows.

1. *Lack of public information about the special needs of exceptional children.* To help correct this lack, specialists have made many public addresses, radio broadcasts, and television appearances and have prepared numerous bulletins and articles on exceptional children and their education. Private and professional organizations, such as service clubs, parent-teacher groups, and fraternal societies, have given assistance at their meetings and through their publications.
2. *Lack of trained personnel.* Staff members of the Bureau of Special Education have been assigned to assist in special workshops and to serve as instructors of special courses during summer sessions in colleges and universities. The California State Elks Association and the California Congress of Parents and Teachers are offering scholarships and fellowships in special education. The State Department of Education initiated legislation to allow certificated employees to assist with eye screening tests.
3. *Inadequate financial assistance from the State for meeting the heavy capital outlay costs and the costs of providing special teachers, transportation, and special supplies.* The State Department of Education has sponsored legislation to correct these inadequacies and has been successful in obtaining increased assistance as follows:
 - (a) The maximum reimbursement to school districts and county superintendents of schools for the excess costs of educating mentally retarded minors has been increased from \$75 per unit of average daily attendance to \$150.
 - (b) Costs to school districts and county superintendents of schools for transporting severely physically handicapped children to and from special day classes are reimbursed by the State.
 - (c) Improvements have been made in methods of computing attendance of physically handicapped minors and of making inter-agency contracts for the education of the physically and mentally handicapped.

Further legislation is being introduced to give additional State financial assistance to school districts that are constructing special classrooms for handicapped pupils.

The Bureau of Special Education is grateful for the opportunity to discuss the education of exceptional children in this issue of the *Journal* and desires to express a special word of appreciation to the many persons who have assisted in the preparation of the articles that follow.

JOHNNY GOES FROM REGULAR TO SPECIAL CLASS

THOMAS W. SMITH, *Co-ordinator, Division of Research and Guidance,
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JOHNNY REPEATS FIRST GRADE

Johnny was seven and a half years old and halfway through a repeat session in the first grade. In some ways, things weren't too bad. Johnny knew his teacher liked his red hair and she had told him that she had freckles like his when she was a little girl. She had come to his house and seen his chickens and talked with his dad about the goat, and had worried when Johnny's dog had been sick and unable to care for her puppies. Time and again his mother had said, "Johnny, Mrs. Brown will teach you to read if you will only pay attention."

All during his first year in the first grade, Johnny had tried to read. He had tried to count, too. This year he was trying harder, but the job seemed bigger and tougher. When he was in the reading circle with his group, he would look at the pictures, glance briefly at the word or words beneath each of them, and then read on and on. He would read a full story, even though there was just one or maybe two words beneath the pictures. Mrs. Brown would try to help him to see that the story included just one or two words about just one thing in the picture. The other youngsters were helpful too. One day when the supervisor was visiting in the room and helping Mrs. Brown by reading with Johnny's group, the other children were careful to warn her in quiet voices, "Johnny doesn't read."

Johnny had been around school long enough to know that there were other activities in school than reading. He had discovered that his finger painting had brought praise, both from Mrs. Brown and from the children in his group. They had liked the way he made a tree like the one in his back yard. He couldn't understand, however, why Mrs. Brown suggested, several weeks after he had made the tree over and over, that maybe he would like to paint a different picture.

It seemed to Johnny that most of the children in the classroom always knew what they were supposed to do, but he was never sure. His mother had told him, "If you don't know what to do, ask Mrs. Brown." So he would go to Mrs. Brown many times during the day and say, "Do I do it

here?" or, "Is this what you want me to do?" Even after he was well started, Johnny would go back and ask other questions to make sure that he was on the right track and that he was doing what he was supposed to do.

Although Johnny's mother thought it was not doing "school work," Johnny enjoyed putting together the puzzles that were on the shelves at the side of the room. He felt that he could do the hardest puzzle in the room, but Mrs. Brown had asked him to let other children share the puzzles. Johnny was always willing to do this and he was glad to help others put the puzzles together. He seemed to know where each piece belonged. Even the hardest pieces seemed easy for him. Of course, this was the second year that Johnny had worked the puzzles.

Johnny looked forward to recess although he didn't always know which way to turn or which way to run. He knew he was welcome to take part in the games and he felt that he had friends. Yet these weren't the same friends he'd had the year before. Those friends were in another room, and although he always said hello when he saw them, they seemed to be busy in games of their own. His new friends seemed glad to see him, but they never called his name or came to get him to play. Many days he thought it was nice just to stand and watch the other children play. In fact, Johnny was beginning to think that perhaps it was better to stand and watch than to go ahead when he was not sure of being right.

JOHNNY GETS HELP FROM HOME

The only time that Johnny ever really felt that he was right was when he told his classmates about the animals he had at home. When he told them about the baby chickens and about the ducks that he and his brother had raised from eggs he knew he was right. When he talked about the pigs and the two cows that his daddy kept he seemed to be seeing the animals. Johnny loved to talk about his home and about the things his "Daddy showed him to do." Although the children had heard the same ones many times, they still listened and seemed to enjoy the way Johnny told the stories.

In some ways Johnny was luckier than most boys. His parents said they were keeping the ranch "so both boys will have something to do." They hoped that Johnny would be able to "get through school and be able to earn a good living with his hands." Johnny's father worked hard, but he was never too busy to talk with Johnny about the animals or to show him how to do things that he asked about. Johnny's mother was a good

cook. Children were always welcome in Johnny's yard and in the kitchen. Johnny couldn't remember getting a spanking. In his family, they "all talked things over."

JOHNNY'S TEACHER TALKS TO THE FAMILY

When Mrs. Brown, Johnny's teacher in the regular class, came to the house to talk about Johnny's going to a new and special class that was being organized in the district to help youngsters who needed more individualized instruction in their school work, Johnny's mother and father and his older brother and big sister sat down with Mrs. Brown to talk about the new class. They wanted to know whether Johnny would be separated from all his old friends. They wondered if he would be promoted like the other children. They asked if he would learn to read in the new class. Most of all, they wanted to know how Mrs. Brown felt about it. After all, she had known Johnny and the family for a long time. Mrs. Brown explained seriously, and frankly, that she didn't know too much about the class. She had met the teacher and liked her. She had seen the new room and knew that there would be only about half as many children in the group as were in the group that Johnny was with at that time. Mrs. Brown knew that Johnny would have more opportunity to be helped individually, and that he would not feel the pressure he felt in the regular class. Mrs. Brown explained that he seemed to be growing more confused daily in reading and in counting. She also said that she was worried about the way Johnny had begun to avoid entering into games and how he seemed to be unsure of what he was to do. She told of how Johnny frequently asked, "Am I doing it right?" She suggested that Johnny's parents visit the new class and talk with the teacher about the advantages the class would offer. This they agreed to do.

THE SCHOOL PSYCHOLOGIST WORKS WITH JOHNNY

Before Johnny enrolled in the special day class he went to see the school psychologist. Johnny liked this, and told his teacher, "We had a good time, we played games with blocks and puzzles and all kinds of stuff." The "all kinds of stuff" to which Johnny referred were subtests of the Wechsler Intelligence Scale for Children. On this scale Johnny showed abilities that were consistent with his strong points in the classroom. He was able to assemble blocks into meaningful patterns similar to an average seven-year-old child. His age at the time of the test was seven and one-half. He put jumbled pictures into an orderly sequence,

and assembled puzzle-type material into meaningful patterns similar to an average six-year-old child. When it came to detecting the missing parts in a series of pictures that were shown to him, he saw a few things wrong. For most of the pictures he said, "It looks all right to me." On the test of perception, which was not unlike the perception problems involved in reading, Johnny saw things more like an average four-year-old child. He was able to count blocks like an average five-year-old, but he was unable even to deal with problems that a boy his age might be expected to solve. When it came to the memory test Johnny began to be aware that he was not doing too well. When asked to repeat four numbers that were said for him he shook his head, smiled and said, "I like to do puzzles."

Johnny was given a vocabulary test from the Stanford-Binet intelligence Test. He successfully defined the words that a boy his age might be expected to define. His score on this test was consistent with his performance on the verbal reasoning test and on the information test of the Wechsler where he scored at the six-year-old level. When it came to spoken words and general information, Johnny seemed to be able to take care of himself pretty well. When he could see and feel what he had to do, like assembling blocks, or putting parts together to make a meaningful picture, Johnny was only about one year retarded compared with other children his age. But in counting or seeing missing parts in pictures, or remembering numbers, the job seemed to become suddenly difficult for him. Johnny's ability in this work was from two to three years below that of other children his age.

Johnny's score on the Wechsler Intelligence Scale for Children indicated that he had a total IQ of 76; a verbal IQ of 74; a performance IQ of 73. This was somewhat higher than he had rated on the Stanford-Binet, Form L, which was given him a year earlier. On that test his IQ was 69. On the California Test of Mental Maturity which was given midway during Johnny's first session in the first grade his IQ was 71. In the case of this examination, it was interesting to note that his highest score was on the vocabulary test. On this he scored at the six-year-old level. His age at the time he took the test was six years and six months.

The psychologist noted during the examination that Johnny's movements in the performance test in which he used his hands and eyes in problem solutions were at times quick and impulsive. In these instances Johnny gave the impression of seeking the solution by trial and error response. On one occasion when he was praised for a successful solution

to a problem, he said, "Now I get to tell my mama what I did." In many ways his speech patterns were like that of a younger child. For example, Johnny had trouble with the *th* sound. To him *thumb* was sure to be *fumb*.

The psychologist had wondered about the accuracy of Johnny's hearing and vision. A check of the health record, however, revealed that his vision and hearing had been found normal on two examinations; one examination by the school nurse, the other by the school doctor. Although Johnny had no history of childhood illnesses on his record, there was a comment that his tonsils had been inflamed at the time of examination, and that he was subject to frequent colds.

JOHNNY'S PARENTS TALK TO THE SCHOOL PSYCHOLOGIST

In a conference with Johnny's parents, the psychologist learned that Johnny's older brother had been treated for a thyroid disturbance for a number of years and that his mother had been treated for thyroid difficulties. Johnny's parents had hoped that he wouldn't have that problem but they were willing to have a re-examination. They knew that Johnny's tonsils were bad, and they were saving money to have them removed. They explained that Johnny seemed to tire easily at times. They wondered why he bit his nails as he did. They were curious as to why he remained so chubby when he really wasn't a heavy eater. Johnny's parents were friendly, co-operative, and concerned. They wanted him to have every opportunity to learn and they were willing to have him placed in a special day class if that would give him the opportunities that he needed.

JOHNNY'S STORY REVIEWED BY SCHOOL STAFF

Following the psychological examination, a conference was held between the teacher, the principal, the school nurse, and the school psychologist to review Johnny's case. This conference was held after school hours and the special class teacher was invited to participate. Each person told part of Johnny's story, reviewing the records, anecdotes, and behavior over the three years they had known him. The group felt that two things were needed in Johnny's case:

1. Placement in a special training class.
2. Complete medical examination to determine the possibility of an endocrine imbalance and possible toxic conditions resulting from diseased tonsils.

JOHNNY MEETS THE SPECIAL CLASS TEACHER

The special class teacher asked if there were any of Johnny's pictures, possibly one of his finger paintings, which she could have to display on the wall in her room so that it would be there when Johnny came the first day. She also asked if she might borrow one of the familiar puzzles that Johnny had liked to work. She inquired about his success as a monitor and the type of responsibilities he seemed best able to take over. Mrs. Brown provided the special class teacher with a number of pictures, one of Johnny's favorite puzzles and the only book he ever selected from the reading table. The special class teacher asked Mrs. Brown if she thought it would be all right for her to visit Johnny's home. Mrs. Brown felt that Johnny's new teacher would be very welcome, since the parents had visited the special class and had gotten acquainted. Johnny's family and his regular class teacher had explained to him that he was going to be one of the first children in his school to have a chance to be in the new special class. They told him the class would be small and that he would get special help with his work.

The next afternoon the special class teacher visited Johnny's home, after calling the parents to ask if she might stop by on her way home. Johnny showed her all around the farm, naming the animals, noting each animal's peculiarities, and finally asking the teacher if she would like to have a puppy. The teacher explained that she would like very much to have one but that she had no place to keep it. She asked Johnny if he would like to bring one of his pets to school and tell the class about it. He said, "I'll bring Tony and Jack." The plans were reviewed with Johnny's father and he agreed that he would bring Johnny, Tony, and Jack to school on his way to work in the morning. The next morning, Johnny and his father, with the two baby ducks, Tony and Jack, in a neat cage, were waiting at the door of the special class when the teacher arrived. The ducks stayed for two days and Johnny stayed for the rest of the semester.

JOHNNY FINDS A PLACE IN THE SPECIAL CLASS

At first Johnny seemed to miss his former friends although they still joined him after school and played in his yard and around the barn as they had done before. But he missed them on the playground. He couldn't quite get used to the other children, some of whom spoke in a way that was hard for him to understand. Some of the others were aggressive and pushed him around. He wasn't used to this. Soon he dis-

covered that Norman needed his help. Norman didn't know how to tie his shoes, and day after day Johnny helped him learn to do it. It's true that Norman never got beyond the first knot in the bow, but Johnny felt that was progress enough.

Johnny often confused his work with that of other children, saying that his paintings were their paintings, and that their paintings were his paintings. Little by little Johnny's paintings began to take shape. First there were houses, then trees, then boats, then airplanes. As the details in these various objects became clear, the special-class teacher and his classmates praised his work. Johnny seemed to want to paint all the time. There were many opportunities in the group for rhythms, much exercising, including running, jumping, hopping, and skipping. In these activities Johnny did well. Gradually he stopped asking whether his work was right and began to acquire ability to follow directions. He tried hard to finish a job once he started it and left very few jobs unfinished.

As in the regular class, Johnny's greatest joy was in telling stories. Many times he told about his farm, and the youngsters in the special class took two trips to see his animals and to share in all his secrets about them. Johnny became the class story-teller. He loved to tell stories about when he and other members of the class went on scouting trips. These stories were long and fanciful and full of humor.

Although Johnny enjoyed his painting and the group stories which the teacher put up on charts, and the music, rhythms, outdoor play, and puzzles, he still wanted no part of the reading activities. While the teacher was working with other children at reading, he would say, "No, not me, that's not for me," and repeat this phrase many times. The special-class teacher did not try to force him to read. She made certain, however, that as every new book came to class, Johnny had an opportunity to look at it. At first he did not want to open the books, but as time passed and as more and more of the books related to animals, he became more interested in the pictures and in the content.

JOHNNY AND HIS PARENTS DISCUSS THE SPECIAL CLASS

The special-class teacher talked with Johnny's parents from time to time about his reading and his other interests. She showed examples of his work and described and reported some of the things he said and did in the classroom. Johnny's mother, however, did not lose her fears about Johnny's not learning to read. She still insisted on helping him with

his reading at home. Even at the close of Johnny's first semester in special class, she was talking of her hopes that his reading would improve after his tonsils were out and the planned program of endocrine therapy was begun. Johnny's mother continued to feel that Johnny should be made to read, but she frequently said that he seemed happier in the special class than he had been in the regular class, and that Johnny liked school since he had been in the special class.

Johnny never became as concerned about reading as was his mother. He stopped biting his nails. He participated in all the activities at school. His stories about the scouting trips grew more humorous and imaginative as the days passed. He volunteered to count for the lunch periods and attendance record. He never smeared a drawing and was always eager to have his pictures exhibited. He bragged to his former classmates about his new class and told them what he was going to do the next year. He was proud when his big brother came to visit his class and asked the teacher if he might play some special records for his brother while the class demonstrated their rhythms and tumbling activities. Johnny invited his new friends from the special class over to his home on Saturdays and was a guest at their homes frequently. Although he didn't say so, at the end of the year Johnny seemed to reflect the feeling, "Next year I'm going to read, and do many more things than I did this year."

EDUCATION FOR THE HARD OF HEARING¹

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Planning a program of special education for hard-of-hearing children must be done in relation to the needs of the children that are to be served. To determine the children's need it is first necessary to test their hearing to determine the degree of hearing loss of each child. If the hearing loss is slight, the training necessary to help the child make adequate adjustment may be provided through remedial classes. If, however, the hearing loss is too great for the child to receive in remedial classes the help which he needs to overcome his handicap, there must be provision made for his education in special day classes for the hard of hearing.

TESTING CHILDREN'S HEARING TO DETERMINE THEIR NEEDS

The governing board of each school district in California must provide for the testing of the hearing of each child enrolled in the schools of the district. However, children whose parents or guardians file with the governing boards a written statement that they will not give their consent for the child to take a physical examination must be exempted from taking the tests. Tests given to determine children's ability to hear must be adequate in nature and they must be administered by qualified supervisors of health who are employed by the school district, or by certificated employees of the school district or of the county superintendent of schools who possess the qualifications prescribed by the State Board of Education, or by contract with a duly authorized agency.²

Since children respond early in life to the speech of others, instruments for testing hearing, such as the group speech audiometer which uses varying intensities of the spoken voice as a medium of measurement can be used effectively in determining whether or not small children have hearing impairments. Each pupil found to have a hearing loss when screened by a group speech audiometer should be tested, if possible, by a pure tone audiometer in order to determine the per cent of hearing loss and the extent to which the ability to hear high, middle, and low frequency sounds is affected. Such information often is of considerable im-

¹Based on information received from Ventura County, San Luis Obispo County, Santa Cruz County, Contra Costa County, Centinela Valley Area.

²Education Code Sections 16482, 16482.1, 16483.

portance in making a proper medical diagnosis. The parents of each child discovered with hearing loss must be so informed and advised to seek advice regarding the care and treatment that the child should be given.³

When medical treatment is necessary but cannot be paid for by the parents, it may be provided for from funds that are made available by the Crippled Children's Service under the direction of the State Department of Public Health. Free otological clinics have been established in several areas in California through the co-operative efforts of the superintendents of schools and the local health officers. They are staffed by local otologists who are members of the American Board of Otolaryngology. The otologists are paid from funds made available through the California State Department of Public Health and the board of supervisors of the county in which the clinic is operated. In those areas in which free otological clinics have been established, children who are discovered with severe hearing loss may be referred to the clinics for examination and to receive advice regarding the treatment that they need.

The results of hearing tests make available information regarding children with slight hearing loss who must be given special instruction in ways to overcome their difficulty and children with severe hearing loss who must be provided in special classes the education that is suited to their particular needs.

MOBILE UNITS FOR TESTING CHILDREN'S HEARING

Most large school districts have equipment that can be moved from school to school for testing children's hearing. They also have rooms available that are suitable for administering the tests. Many small school districts are not so well equipped for testing children's hearing. They have neither the equipment nor the space for proper testing. A mobile unit for testing hearing has proved to be a most satisfactory solution to their problem. In some counties the county superintendent of schools has made such units available.

One mobile unit that is in use in a county in California is equipped for testing both hearing and vision. This unit was originally an old school bus of standard design. The body of the bus was remodeled into a room for testing hearing and vision. This remodeling included (1) raising the top sufficiently to leave 74 inches between the floor and

³ Education Code Section 16484.

ceiling; (2) replacing the side windows with steel panels; (3) installing skylights of blue-tinted, sand-blasted, double-pane shatter-proof glass, ceiling vents, and sound-absorbing acoustical materials; and (4) installing wiring for lighting and instrument operation.

Control of noises originating outside the testing room was accomplished by insulating the ceiling and floor, coating the underbody surface with underseal, setting the rear window and skylights in rubber, and hanging padded curtains at the back window and the window in the door. Perforated aluminum was used for the ceiling, acoustical tile for the walls, and the floors were padded and carpeted to control noises originating inside the testing room.

The room is wired for 110 volts. Power is secured by hooking onto the circuit of the school building at which testing is being done. A long extension cord is available for this purpose. There are outlets at the front and rear of the room. The light at each testing station operates on a separate switch. There is a master switch on the instrument panel of the bus.

Storage space for equipment is provided in two lockers that are located at the rear of the bus and in the spare-tire locker under the bus. There are 26 individual stations for testing hearing. Each of these stations has side panels that reduce noise and restrict side vision. The desk tops are made of sound-absorbent material. There is a headphone at each station. There are also outlets for five headphones at the front of the testing room. These are for the tester and observers. A group speech audiometer is built in. The turntable for this audiometer is operated by a spring; the volume is powered by a dry cell battery. There is also a pure-tone audiometer that may be set up for use on a specially designed folding table located behind the driver's seat.

Vision testing equipment consists of the Massachusetts vision test chart, which is located so that through the use of mirrors a viewing distance of twenty feet is established. When the curtains are drawn on the rear windows and the window in the door, the chart may be properly illuminated for standardized vision testing.

PROVISIONS FOR THE EDUCATION OF HARD-OF-HEARING CHILDREN

As for other physically handicapped children, governing boards of California school districts must provide special classes for the education of hard-of-hearing children. County superintendents of schools may provide such classes for hard-of-hearing children who would otherwise be denied proper educational advantages.

Hard-of-hearing children can be enrolled in special day classes at the age of three years and in remedial classes at the legal age for school entrance. They can remain in public school classes until they are twenty-one years of age.⁴ Either the school districts or the county school service funds are reimbursed from State funds for the excess cost incurred in educating these children in amounts not to exceed \$400 per unit of average daily attendance.⁵

The needs of hard-of-hearing children can be determined by analyzing their facility with oral language, examining their educational record, and testing with an audiometer their auditory reception of speech. After their needs have been thus determined, a program of education can be planned that will help each child overcome his difficulties.

Children who have good language facility and only slight hearing impairment should be retained in their regular classes and provided during special periods the remedial instruction that they need to overcome their difficulties. Children who are educationally retarded, who suffer from arrested language development, and who have severe hearing impairments should be assigned to special day classes. As these children develop language facility they should be given opportunities to participate in regular classes with children who have no hearing impairments. The teacher for the special class will work with the teachers of the regular classes and supervise the activities of the children assigned to them from the special classes.

PLANS FOR ADMINISTRATIVE ORGANIZATION OF SPECIAL CLASSES FOR HARD-OF-HEARING CHILDREN

Many different plans of administrative organization are employed in California schools to provide the special day classes that are needed for the education of hard-of-hearing children.⁶ School districts with large enrollments conduct special day classes for hard-of-hearing children. Usually such classes are conducted in only one or two schools in the district. School districts with small enrollments frequently join together in establishing special day classes for hard-of-hearing children. These districts share the expense of operating such classes on the basis of the number of children that enroll from each district in the classes. Some school districts with small enrollments make contractual agreements for the education of children living within them with other school districts

⁴ Education Code Sections 9601, 9609.

⁵ Education Code Sections 7101, 7103, 9617.

⁶ Education Code Sections 9601, 9601.2.

operating special classes for the hard of hearing. When such contractual agreements are made, the school district in which the children reside pays their tuition to the school district maintaining special day classes. In some counties the superintendent of schools establishes and operates special day classes for the hard-of-hearing. Such classes are financed from county school service funds. They may be attended by children from any school district in the county provided permission is granted by the governing board of the school district in which they reside. The administrative plan of organization employed to provide the instruction needed by hard-of-hearing children in a particular geographical area is based upon such factors as the number of children involved, the degree of hearing loss found among such children, the ability of individual districts to finance the special classes necessary, and travel distances.

ARTICULATION OF SPECIAL CLASSES FOR HARD-OF-HEARING CHILDREN

In one area in California where pupils graduated by four elementary school districts attend one of two schools in a union high school district, an articulated plan is used to provide special classes for hard-of-hearing children. These classes are open to hard-of-hearing children as soon as they are of legal age to enter and are maintained for them at all levels through grade twelve.

A committee composed of two members from each of the elementary school districts and the union high school district advises on over-all policies relating to the establishment and operation of special day classes for hard-of-hearing children. The superintendent of each school district appoints to this committee one representative of the parent-teacher association in his district and one representative from the faculty of the schools in the school district. Provision is thus made for keeping the communities served by the school districts and the faculties of the schools informed regarding the establishment and operation of the special day classes.

A specialist in the education of hard-of-hearing children is employed as co-ordinator of the special classes. He works with the advisory committee for the school districts co-operating in establishment and operation of special classes for hard-of-hearing children, in formulating over-all policies for such classes, with the high school policy committee in formulating specific policies related to the operation of the special class at the high school level, and with the superintendent of each school district in solving administrative and technical problems that are related to

the special classes. The cost of his services is shared by the school districts participating in the program.

The high school district has also established a committee to formulate policies for selecting students to be assigned to the special day class for hard-of-hearing children and for reassigning students in the special class to regular classes. This committee is composed of the co-ordinator of special classes for hard-of-hearing children, the curriculum director for the high school district, the director of guidance and curriculum and the school nurse from each of the two high schools in the district, and the teacher of the special class for hard-of-hearing children.

Students who attend the special day classes for hard-of-hearing that are co-operatively conducted by the elementary school districts are assigned to the special class that is conducted by the high school district. And students who needed the special instruction that is provided in a remedial class at the elementary school level are given similar assistance at the high school level. Other students that are assigned to the special class for the hard-of-hearing or that are given special instruction are discovered through the use of speech and pure-tone audiometer tests. Such tests are given to all freshmen and other new students entering the high schools in the district. When a student is thus discovered who has sufficient loss of hearing to be considered for assignment to the special class or to the remedial class for special instruction, information regarding the extent of his hearing loss, the history of his hearing loss, medical recommendations if available, speech defects noted, intelligence and achievement ratings available, and the extent of his social adjustment are supplied to the curriculum director for use in making the assignment that is necessary.

The students who are assigned to special classes for the hard of hearing attend such classes for part of each school day and regular classes for the remaining time in the regular school day. Usually they take physical education or a shop course during this time. There are a few, however, who take some academic work in other regular classes. The teacher of the special class works closely with the teachers of regular classes in which such students participate.

Students who are assigned for instruction in the remedial class are enrolled for all their work in regular classes. They are usually instructed in the remedial class, mainly in lip reading, for a single period daily.

PUBLIC SCHOOLS AND THE EDUCATION OF DEAF CHILDREN

CHARLES W. WATSON, *Consultant in Education of the Deaf and the Visually Handicapped, Bureau of Special Education, California State Department of Education*, assisted by Personnel from the Oakland Public Schools

School systems and school authorities have the responsibility of providing for the educational needs of all children. This involves the physically handicapped and, of course, applies to deaf children.

The public and persons in the profession are in agreement that the education provided for deaf children must be adjusted to the needs which deaf children have in common with hearing children. Obviously the program of education for deaf children must also be designed to meet the special needs imposed upon them by their sensory handicap.

There is growing conviction on the part of parents and educators that the special education to meet the needs of deaf children should, when feasible, be provided locally within the framework of the public schools. This conviction is based upon the belief that definite educational, psychological, and economic advantages are derived from such provision. Regional and state agencies concerned with the educational welfare of physically handicapped children are prepared to make available trained personnel to help establish special education programs within the framework of local schools.

The governing board of each California school district must provide the special services that are necessary for the education of deaf minors who reside in the district. The district may provide the services by maintaining special classes, by contracting for services by another school district, or by taking advantage of services made available by the county superintendent of schools of the county in which the school district is located. The parents or guardian of a deaf child who cannot be successfully educated locally should apply for his admission to a state residential school for the deaf.¹

Generally speaking, public school special day classes for the deaf should be limited to communities in which at least 18 to 24 deaf children

¹Education Code Sections 9601, 9601.2, 9641, 16627, 17251.

can be brought to a central location. Experience has shown that it is difficult to obtain a satisfactory grade placement of deaf children with a lesser number. Children residing in school districts in which the establishment of special day schools or classes is impracticable may be enrolled in a residential school for the deaf administered by the state.

School districts operating special schools or classes for deaf minors will be reimbursed from state funds for the excess current expense incurred in providing special services, to the extent of \$400 for each unit of average daily attendance,² and for the costs of transporting deaf children to and from special day classes, in amounts not to exceed \$350 per unit of average daily attendance. Due to these provisions, the per cent of deaf children who receive special education in California schools should rapidly become greater than the 63½ per cent that it is estimated are now receiving such education.³

School districts planning special education programs for deaf children may find help in the following description of a program that is being operated successfully in Oakland. This description was prepared by the staff of the public day school conducting the program.⁴

AN INTEGRATED PROGRAM FOR DEAF CHILDREN

Facilities for the education of deaf children in Oakland public schools are provided at three levels: elementary, junior high school, and senior high school. The facilities for each level are located in a regular school for hearing children. The elementary department is at Hawthorne Elementary School; the intermediate at Hamilton Junior High School; and the most advanced at Fremont High School. The program, in its entirety, is known as the Day School for the Deaf.

The Day School for the Deaf was established in 1898. From the beginning, the aim of the school has been to help deaf children become self-supporting, competent, well-adjusted members of our democratic society. Teachers, supervisors, and administrators co-operatively determine the character and scope of the program.

The seven classes in the elementary school range from a preschool class for three-year-olds to an advanced class for twelve-year-old children. The average number of children in each class is eight. Classification,

² Education Code Section 7101.

³ Roy E. Simpson, Superintendent of Public Instruction, "Report for Governor's Council June 27, 1950," covering activities of the State Department of Education during May, 1950. Sacramento: California State Department of Education, June 27, 1950 (mimeographed).

⁴ Evelyn Veitch, Patricia Stafford, Paul Donaldson, Mrs. Grace Ross, Dorothy Ziebach, and Grace Paxson, teachers; and Al Tudyman, Director of Special Education, Oakland Public Schools, Oakland, California.

grading, and promotion are made on the basis of each child's probable learning rate, social and emotional maturity, physical growth, size, and chronological age.

Any child who has reached his third birthday and who is a bona fide resident of the Oakland elementary or high school district is eligible for placement in a class for the deaf if

- (1) he was born deaf,
- (2) he lost his hearing at such an early age that he has no memory of speech, or
- (3) his hearing is so impaired that he cannot learn through his ears either with or without the benefit of amplification.

Each child, however, is first placed in the program on a trial basis. Permanent placement is made after the child's ability and needs have been determined.

Each child's ability and needs are determined through observation, consultation, and testing. An audiometer is used to test his hearing. The results of the test are analyzed in consultation with an otologist. The child's ability to learn is determined by administration of standardized tests for use with deaf children, e.g., the Ontario School Ability Examination and the Hiskey Test of learning. These tests are given and scored by a certificated psychometrist. Achievement tests are administered by the child's teacher at intervals during the trial period to determine his educational attainment and needs. The Vineland Social Maturity Scale is used to determine the child's social and emotional adjustment, and his needs in these areas.

Special education for the deaf, when offered within the framework of the regular school program, gives both deaf and hearing children opportunities to profit from the contacts that they make with each other. In the Oakland Public Schools, deaf children study rhythms and participate in physical education activities with hearing children of comparable age. Deaf and hearing children also have their social studies classes together when possible. They share study trips, visual-aid materials, and project work. When a unit of work is completed, a culminating program is planned with the children in both classes taking part. The program is usually staged in the auditorium before an invited audience of parents and children of other classes. The program is planned carefully to provide visual as well as auditory appeal. All the contacts made by the children during the time the project is being completed help the

deaf children to appreciate the need for being good lip readers and having good speech and natural language. The hearing children learn to accept the deaf children as their schoolmates and to become more tolerant and understanding of them.

Deaf children who attend special day classes that are offered within the framework of the regular school program live in their own homes. Their parents and the school co-operate closely in providing the educational opportunities that they need. This co-operation is furthered through group meetings in which the children's parents and teachers participate, through class visitation by parents, home visitation by teachers, and conferences between the children's parents and teachers.

The Day School for the Deaf has a very active parent-teacher association. This group meets once each month. The meetings are held in the evening so that parents who are employed may attend. The children are included at two meetings during the year—the get-acquainted potluck supper held early in the fall and the Christmas meeting. Speakers on subjects of interest to this special group are invited to the other meetings. The parent-teacher association has been very helpful in earning money to purchase special equipment. The association has helped to secure a number of extra items needed for use in the special classes. Recently \$1,200 was raised to apply toward the purchase of new group hearing aids. Deaf children, although unable to hear spoken, connected language can benefit considerably from teaching methods which use amplified sound. Rhythm, accent, and emphasis in speech are taught through amplified vibrations. From time to time, courses that will be of help to parents in dealing with their children's needs for better home and social adjustment are offered for parents and others who may wish to attend.

Since 1928, when a father of one of the deaf children built an elaborate network of tubes and funnels for sound amplification, auditory training has been an important part of the special education program. In 1932 a Radio Ear was purchased. Since that date, radio engineers have built amplifying systems for the special rooms. These, with a few portable units and individual aids, constitute the school's hearing-aid equipment. Up-to-date, new hearing aid equipment makes available to the deaf children those advances in sound amplification that are provided by post-war equipment.

Instruction in the Day School for the Deaf is pupil-centered. The language arts are emphasized in each phase of the education program. A list of children's broad interests at each two-year level of maturity and

of the language concepts that are natural to children at each level is employed as a basis for adjusting instruction to the children's abilities, interests, and needs.

A committee composed of teachers of deaf children and teachers of hearing children have developed a chart on which the reading skills are listed and the sequence in which they should be presented is indicated. Reading books available for use are keyed to the chart so that they can be used in a variety of combinations. These provisions make it possible for the teachers of special classes to keep instruction in reading for deaf children closely related to the reading instruction that is given hearing children. Thus deaf children with good language facility may be offered opportunities to participate in regular classes in reading.

Deaf children attending special classes at the elementary school level are promoted to the junior high school classes at about twelve years of age. At the junior high school level, deaf children are allowed to take some work in regular classes and required to take physical education in regular classes. Usually the girls attend regular classes in cooking and sewing. In these classes they learn to prepare and to serve meals and to make some of their own clothing. The boys usually attend regular classes in shop. In these classes they learn about materials and how to use hand and power tools in constructing articles for themselves and for their homes.

At the junior high school level, academic work for deaf children is carried on in specially equipped rooms, but those whose language facility approximates that of hearing children of similar age are allowed to attend some regular classes. Each child that is allowed to enter a regular class is given special help in the subject during a study period. Sometimes additional help is given such children during periods before and after school.

At the high school level, a special class for the deaf is conducted in Fremont High School. The teacher of this class also acts as coach and counselor for the deaf students. Deaf students who have acquired adequate proficiency with language to participate in regular classes are encouraged to do so.

PUBLIC SCHOOLS AND THE NEEDS OF VISUALLY HANDICAPPED CHILDREN

CHARLES W. WATSON, *Consultant in Education of the Deaf and the Visually Handicapped, Bureau of Special Education, California State Department of Education*, and FLORENCE G. HENDERSON, *Assistant Professor of Special Education, San Francisco State College*

Children's growth and development as personalities result from an interplay of the factors in their native endowment and the environment in which they live. The differences evidenced by children reflect a multiplicity of combinations of these factors. They may be noted in the children's physical, mental, emotional, and social characteristics and traits.

Obviously the five senses are important factors in children's growth and development as personalities. Sight is possibly the most important of these senses. Scobie states that "80 to 85 per cent of our sensations from the world reach us through our eyes."¹ Betts observes that "over 80 per cent of reading, writing, and other school achievement is dependent on a child's ability to see properly."² Imus contends, "The importance of vision has been overlooked in many recent attempts to solve the problems of disability in reading."³

A child's visual health and efficiency are matters of supreme importance. From birth on it should be a matter of watchful concern and care on the part of parents. And when a child enters school, his visual health and efficiency become of utmost importance to his teachers. Teachers know that a child's vision is all important, especially in school work. They also know that a child with an undiscovered visual difficulty may be wrongly judged and thereby suffer great injustice. Scobie makes the following observation:

. . . . a child, seeing only part of the world around him, may be accused by his teachers of stupidity, inattention, or being a behavior problem. The defense mechanisms raised by the child to such accusations are almost legion and practically none of them are good. . . .⁴

¹ Richard G. Scobie, "Vision Testing of School Children," *The Sight-Saving Review*, XX (Fall, 1950).

² Emmett Albert Betts, "Ten Good Reasons Why You Should Send Your Whole Child to School in September," *Visual Digest*, XV (Summer, 1950).

³ Henry A. Imus, "Visual Efficiency," *Hygeia*, XIX (April and May, 1941).

⁴ Scobie, *op. cit.*

Since the status of children's vision is so important, no school system will be doing all that it should unless children's eyes are being systematically and periodically tested. Fortunately, in California, the governing board of each school district must provide for the testing of the sight of each child enrolled in the schools of the district.⁵ Programs for this purpose are being introduced as rapidly as trained personnel become available.

The State Joint Committee on School Health, composed of representatives of the State Department of Education and the State Department of Public Health, has prepared a bulletin to guide local public health and school personnel in setting up vision-testing programs. In this bulletin the four types of vision tests used in schools are discussed. The inadequacy of the Snellen Test as a means of discovering all vision defects is emphasized. The importance of using other tests to supplement the Snellen Test is made apparent.⁶

The White House Conference on Child Health and Protection estimated that eye defects are found in 20 per cent of all children.⁷ A writer for the *Visual Digest* states, "Of the 30,000,000 school children in this country, 6,000,000 have visual disturbances and need visual care."⁸ The National Society for the Prevention of Blindness, in discussing facilities for the needs of partially seeing pupils, stated that "in communities having had long experience, it has been found that one to five hundred is nearer the correct ratio" in need of such facilities.⁹

The following table, developed by Baker, indicates the per cents of the children in the United States with different degrees of vision.¹⁰

PER CENTS OF CHILDREN WITH VISUAL DEFECTS

Degree of Defect	Per Cent
Normal vision	80.00
Correctable defects	19.75
Partially seeing	0.20
Blind	0.05
TOTAL	100.00

⁵ Education Code Sections 16482, 16483, 16484.

⁶ *Vision Testing of School Children*. San Francisco 2: California State Department of Public Health (760 Market Street), May, 1950. (Requests for this bulletin may be sent to the Department of Public Health or to the Bureau of Textbooks and Publications, California State Department of Education, Library and Courts Building, Sacramento 14.)

⁷ *Special Education: The Handicapped and the Gifted*, report of the Committee on Special Classes (Charles Scott Berry, Chairman), White House Conference on Child Health and Protection. New York: The Century Co., 1931, pp. 126-27.

⁸ Beets, *op. cit.*, pp. 26-27. An editorial note states that "Authorities in the fields of vision, education, psychology, have been consulted and the facts above represent the results of their research."

⁹ *Educational Facilities for Partially Seeing Pupils in School Systems*. New York 19: The National Society for the Prevention of Blindness, Inc. (1790 Broadway), 1945 (revised edition).

¹⁰ Harry J. Baker, *Introduction to Exceptional Children*. New York: The Macmillan Co., 1944, p. 29.

Enrollment in the public schools of California, kindergarten through twelfth grade, was 1,667,515 on March 31, 1951. Providing the per cents indicated by Baker are accurate and apply to any section of the country, the visual status of children in California schools may be estimated as follows:

<i>Degree of Defect</i>	<i>Number</i>
Normal vision	1,334,012
Correctable defects	329,334
Partially seeing	3,335
Blind	834
TOTAL	1,667,515

If the above proportions hold true for school children in California, California schools are not meeting adequately the visual problems and needs of the children. No evidence is available as to the extent to which children with correctable visual defects are receiving adequate care. The extent to which schools are meeting the needs of the more severely handicapped children by providing programs for the partially seeing and the blind is indicated in data collected by the Bureau of Special Education in April, 1951. According to these data, there were an estimated 3,532 children in California who were partially seeing but only 961 of them were receiving special education. There were an estimated 883 children that were blind and only 350 of them were reported as receiving special education. There were 122 blind children reported as enrolled in school but not receiving special education.

Information taken from the records kept during 1949 by Crippled Children's Services, California State Department of Public Health, shows a total of 6,723 individuals under 21 years of age with noncorrectable vision difficulties. Of this number, 4,818 have strabismus and 1,905 suffer from blindness or have eye conditions leading to the loss of vision.¹¹

Evidence indicates that the number of preschool children who are blind is increasing. Lowenfeld states that in New Jersey the number of blind preschool children increased 28 per cent from 1947 to 1950. There were 96 preschool blind children reported in 1947 and 123 reported in 1950. He also states that the New York State Commission for the Blind reported 115 preschool blind children in 1947 and 492 in 1950. Lowenfeld points out that this increase in the number of cases reflects (1) a genuine increase in blindness among preschool children; and (2) factors

¹¹ Letter, March, 1950, to Leonard Hesterman, Executive Director, Opportunities for the Blind, Inc., from Robert Dyar, M.D., Chief, Division of Preventive Medical Service, California State Department of Public Health.

of mandatory reporting, better case work, and improved extension services.¹²

California does not have a mandatory reporting requirement that gives a complete picture of trends in this state. However, indirect evidence taken from the records of private and state agencies that work with the parents of preschool blind children reflects the same marked increase that was found in New Jersey and New York. Such evidence has implications for planning the inauguration and extension of special education services to meet the requirements of visually handicapped children.

School children in any community, when considered from the standpoint of vision, fall into four general groups: (1) those with normal vision; (2) those with correctable defects whose eyes will still require some consideration after correction; (3) those who will require special education provisions in addition to any possible correction; and (4) those with little or no vision who are known as "educationally blind."

Fortunately, the majority of children have normal vision when they first enter school. At this point the care and proper use of the children's vision, in addition to being a concern of their parents, becomes a major concern of classroom teachers. The basis for this concern becomes obvious when attention is directed to the fact that 75 per cent of the learning activities in the elementary school and 85 per cent of those in the secondary school involve reading.

Teachers of children with normal sight need to understand the structure, function, and pathology of the eye. They also need to know how they can apply their knowledge in furthering the visual welfare of children. Obviously they will need to make periodic checks of classroom conditions and instructional practices that may in any way affect the visual efficiency and welfare of the children under their supervision. Teachers whose professional training has not included any work pertaining to the structure, function, and pathology of the eye should read available literature pertaining to vision.¹³

Unquestionably a large number of children have correctable visual defects. But evidence indicates that many of these children are not receiving corrective services, nor are they being provided the appliances needed to correct their vision. Naturally, teachers are interested in having these children identified. But the responsibility for making the identi-

¹² Berthold Lowenfeld, "Meeting the Needs of Visually Handicapped Preschool Children," *The Sight-Saving Review*, XX (Fall, 1950).

¹³ A catalogue of free literature may be secured by writing to the National Society for the Prevention of Blindness, 1790 Broadway, New York 19.

fication rests with the governing board of each school district.¹⁴ The children discovered to have visual defects should be referred to the proper agencies for correction of the defects. The children's teachers should attempt to make certain that satisfactory correction is provided each child.

Some children have visual impairments that are only partially susceptible to correction. These children need a special program of instruction.

SPECIAL EDUCATION FOR PARTIALLY SEEING CHILDREN

Criteria for placement in special classes for the partially seeing or the blind have been agreed upon by the American Medical Association and the National Society for the Prevention of Blindness. These criteria may be summarized as follows:

1. Visual acuity of 20/70 to 20/200, after correction, in the better eye
2. Serious progressive eye defects
3. Diseases of the eye or diseases of the body affecting vision
4. Unclassified visual defects that, in the process of being treated, impair school progress
5. Eye weaknesses or maladjustments that result from treatment, operations, or convalescence

In California, evidence indicates that 27.2 per cent of partially seeing children are receiving special education services. Many of the other children continue to suffer further decline in their vision and deterioration of their general health and nervous stability while they wait for needed special education services. When such is the case, personality disorders such as a lack of self-confidence, introversion, and self-effacement arise. Children become inattentive, unstable, irritable, or overaggressive. Questions concerning mental competency arise. Retardation becomes an issue. Truancy and premature withdrawal from school occur. Educational, vocational, and social maladjustment are some of the consequences.

The governing boards of school districts are charged with the responsibility of providing for the educational needs of all children. The public and those in the profession of education are in agreement that such provisions must be adjusted to both the common and the special needs of children. Specialists in the education of handicapped children and other school personnel are in agreement that special education programs should

¹⁴ Education Code Section 16482.

be integral parts of the regular programs of public schools. The special programs provide means within the framework of the local school district for meeting the needs of handicapped children. There may be exceptions taken to this plan for providing the special educational services needed by exceptional children. In such instances, the services of special personnel may prove helpful in overcoming the objections.

In California, three general types of special education programs are provided for partially seeing children. Similar programs are in operation throughout the United States.

One type of these programs provides that partially seeing children attend special classes during the entire school day. These classes are taught by special teachers. This arrangement is typical of the programs that have been in existence for a number of years.

In a second type of program, partially seeing children spend as much time in a special class as is necessary for them to learn how to compensate for their visual difficulties and spend the remaining portion of their time in regular classes. This provision makes it possible to emphasize likenesses of partially seeing children and children with normal vision. For as a partially seeing child's educational adjustment progresses, the child spends an increasing amount of time in regular classes. Close co-operation between the teacher of the special class and teachers of the regular classes in which partially seeing children participate is essential to the success of this type of program.

In the third type of program, partially seeing children are enrolled in regular classes of the schools that serve their neighborhoods and receive in remedial classes the special instruction that they need to compensate for their visual difficulties. The special instruction is provided by trained personnel working out of the office of the district or county superintendent of schools. In some instances, several adjoining school districts have employed a trained person to provide the remedial education that is needed in each of the co-operating districts. This type of program has the advantage of permitting partially seeing children to remain in school with their neighborhood playmates. And the program is particularly well adapted for use in large, rural areas where it is difficult to transport children to schools in which special classes are operated for partially seeing children.

Little evidence of an objective nature exists regarding the relative merits of the three types of programs for partially seeing children. Adequate evaluation of each of these types of programs is definitely needed.

In operating each type of program, certain problems arise. Some difficulty is encountered due to the fact that the instructional materials that are set in large type for use by the partially seeing do not adequately parallel the instructional materials that are prepared for use in the regular classes at the same grade level. This difficulty is most pronounced in the operation of the second and third types of programs. Some difficulty is also encountered in maintaining a satisfactory flow of instructional materials that are set in large type, since these materials must be shared and moved from one to another of the schools in which the second and third types of programs are operated. Conversely, these programs do emphasize the importance of giving the partially seeing child an opportunity to work in regular classes with children whose vision is normal. And in so doing, these programs help both groups of children to learn co-operation early in life. Certainly this provision makes it possible for partially seeing children as well as children with normal vision to mature more completely, both emotionally and socially, than would be possible were their educational opportunities provided in separate classes.

Through the use of one of the three types of programs described, or through some combination of them, every school district in California that does not now have a program for partially seeing children should be able to establish one. If this is accomplished, the 72.8 per cent of partially seeing children now denied the special educational assistance they need will be given opportunities to realize their full growth and development as persons.

SPECIAL EDUCATION FOR BLIND CHILDREN

Blind children are those who have no vision, or those who have only sufficient vision to perceive gross objects or light. Although the responsibility for determining the extent of children's visual difficulties and the state of their vision rests with eye specialists, the responsibility for determining how their educational needs can be most effectively met rests with educational personnel. Children whose visual acuity in the better eye, after maximum correction, is 20/200 or less and those whose peripheral field is restricted to the extent that its greatest diameter subtends an arc of 20 degrees or less are considered educationally blind.

The educational needs of children who are blind are basically the same as those of children with vision. Since the preschool years for children with vision are most important in their development as persons, it is apparent that they are equally important years in the development of

children who are blind. Specific provisions to provide purposeful preschool activities for them are most desirable. Large school systems should have on their professional staffs visiting preschool teachers for the blind to aid the parents of blind children in developing such opportunities. And the smaller school systems may look forward to sharing the Preschool Teacher Service of the California School for the Blind. At present this service is available only in the southern part of the state, but similar service is provided in the central and northern areas of the state by the Variety Club Blind Babies Foundation.

Ideally, a program for blind children should be offered from the beginning in a regular elementary school. It should begin with the kindergarten and continue in parallel with each of the regular grades. Of course, fully qualified teachers, adequate quarters, and special equipment and supplies are essential if the needs of the children are to be fully met.

Under the guidance of qualified special teachers, blind children can gain a great deal from being a part of regular kindergarten groups. They need, however, to be with the special teacher for as much time as their special needs indicate. This naturally will be greatest at that period when they are learning the special communicative and computational skills. After blind children have acquired, among other things, a workable knowledge of reality, gained the necessary skill in reading and writing Braille, and made a substantial growth in typewriting, they will be able to work in the regular classrooms for increasing proportions of school time. But during this phase of their schooling, they continue to need the direct guidance and assistance of the special teacher. The special teacher, however, will work progressively less with them directly and more through the classroom teacher in helping these children as they progress through the upper intermediate and advanced grades. Individual differences among blind children will determine the amount of time they will need to spend in the special classes and the extent to which they will profit from working in regular classes. Obviously, adequate facilities and instruction for blind children cannot be provided in every school system. Where it is not feasible to provide them in a school system, other arrangements should be made. In many instances the best program for a blind child will be provided in the California School for the Blind, and the local school district should turn to that agency for the superior service it can render.

A PARENT DISCUSSES THE EDUCATION OF CEREBRAL PALSY CHILDREN

C. H. WHITNER, *Vice-President and Chairman, Cerebral Palsy Division,
California Society for Crippled Children*

We are the parents of cerebral palsied children. Perhaps that is why the physical, emotional, and social problems of such children cause us to feel extreme frustration. Yet we are aware that these problems must be approached objectively. But as parents we are unable to eliminate from our reactions the element of strong parental love. We know our children need that love. It seems, therefore, that we live between "the devil and the deep blue sea," trying to offer love and affection and at the same time trying to make an objective approach to the problems of our children. This is the reason we are in need of help.

You are the teachers of our children. Some of you are in daily contact with them in special classes for the cerebral palsied. Others of you meet them occasionally in the regular classes which some of them attend with physically normal children. You probably know no more—perhaps less—about cerebral palsy than we do. It is not your knowledge of the disability that we rely upon for help—it is your ability to work with our children and us, and to supply the objective viewpoint to balance our emotional approach. Let's take a look at our problem.

Cerebral palsy is a strange condition and its treatment is long and difficult, requiring the close co-operation of a team of doctors, nurses, therapists, teachers, and parents. In everyday language, it is a condition in which muscular control has been impaired or lost. The disability may be severe or mild; it may affect several parts of the body. Speech, vision, and hearing are often involved.

Cerebral palsy is not inherited and does not run in families. It is an injury rather than a disease. Although it cannot be cured, it can be alleviated by a proper course of rehabilitation.

Most cases of cerebral palsy are caused by damage to the brain before or during birth or by faulty development of the motor centers of the brain. If this damage is severe enough, the individual's intelligence is sometimes affected, but impaired intelligence does not necessarily accompany the physical disability.

Approximately one-third of the cerebral palsied children are unable to profit from regular education but respond to the training given in institutions that provide specialized training for the mentally deficient. The remaining two-thirds, even though severely handicapped physically, range in intelligence from low-normal to superior, are mentally qualified to attend public school classes and these children deserve the best we can give them in educational opportunity, treatment, and training to become useful citizens. That spastic child with the scissors gait who now grimaces and drools when he tries to talk may some day be the editor of a newspaper.

Cerebral palsy occurs with almost equal regularity among all classes of people, regardless of social or economic level, occupation, or residence. Cerebral palsy seems to be more prevalent among males than among females, and more common among Caucasians than among Negroes. An average of about four persons in every thousand of the population above the age of six years in this country are disabled by cerebral palsy. This means a total of 500,000 to 600,000 persons of six years of age or over who are handicapped by cerebral palsy.

Socially and physically, the cerebral palsied improve under the right kind of treatment and training. Given the opportunity, a majority of them can become at least partially self-supporting. Obviously, therefore, rehabilitation is more important than mere custodial care. What then is being done about rehabilitation?

Here in California we look on rehabilitation of the cerebral palsied as a broad social problem that requires lay groups and public agencies to work together. The public agencies include state and local departments of education, physical and mental health, and social welfare. The lay groups include the California Society for Crippled Children, the Spastic Children's Society, parent-teacher associations, and others.

The Crippled Children's Act of 1927 made possible the Crippled Children's Services of the State Department of Public Health. From 1939 to 1949 very substantial improvement in educational and medical services for the cerebral palsied was made possible through legislation. A brief outline of this legislation follows:

1939: Legislation enabled local school districts to secure reimbursement from the state for excess expenses incurred in training cerebral palsied children of preschool age.

1945: Legislation was passed that made the following provisions:

- (a) Establishment of two State-operated residential schools for cerebral palsied children.

- (b) Establishment of two diagnostic and treatment centers to be operated in conjunction with State schools for cerebral palsied children.
- (c) Expansion of field services, case finding, physical therapy, and follow-up services of the State Department of Public Health. (Among other things this permits the giving of physical therapy at expense of the State in local public schools for cerebral palsied.)
- (d) Establishment of two positions for consultants in the State Department of Education to develop, promote, and co-ordinate state-wide policies and practices for the education of physically handicapped children, with major emphasis on cerebral palsied minors.

1947: Legislation was passed which made the following provisions for the education of cerebral palsied children:

- (a) Reimbursement to local school districts and county superintendents of schools to cover the excess costs incurred in providing special education for physically handicapped children was increased from \$200 to \$400 per unit of average daily attendance.
- (b) School districts were required to furnish education facilities for the physically handicapped or to contract with other districts to provide such facilities.
- (c) School districts were required to furnish transportation to and from school for those handicapped children whose homes were more than walking distance from the school, or whose handicap prevented walking.
- (d) State funds in the amount of \$250,000 were allotted on a matching basis to assist local school districts and county superintendents of schools in building and equipping classrooms for cerebral palsied children.

1949: Legislation made the provision that follows:

An additional \$500,000 in State funds was allotted to assist local school districts in building and equipping classrooms for the cerebral palsied.

The eventual success of this ambitious program for rehabilitating cerebral palsied children depends on the ability of doctors, nurses, therapists, teachers, and parents to work as a team. Much of the rehabilitation must be carried on in the school, whether the child attends a special class for the cerebral palsied or a regular class. We parents, however, cannot turn over to the school all the responsibility for that training. Physical and social rehabilitation, the adaptation of the child to his environment, must go on at home as well as at school.

In a sense, therefore, we must be full-time teachers responsible for training our handicapped children so that they will have good personal habits, be self-reliant, speak correctly, and have social facility. Parenthood does not automatically qualify us to be teachers. On the contrary, our emotions keep us from being sufficiently objective in a training program. In day-to-day activities we need the help of the team if we are ever to view the disability objectively and unemotionally, discover and accept the limitations imposed by it, and realistically meet the problems it

creates. If this can be done, we will accept the child in an emotionally healthy relationship, avoid oversensitivity in contacts with the public, and in time develop a sound scale of values for judging our children's capabilities. The child will then be given the chance to grow up as a human being, with abilities as well as disabilities, with natural desires and ambitions, and with a means for achieving at least a limited measure of self-sufficiency and personal dignity. Then we will be able to maintain a normal household with a healthy social environment for our children as well as for ourselves.

Parents are people. Too frequently in our impatient urge to help our children we demand too much of them and of their teacher. But through it all we earnestly want to do our best. We need your help and understanding so that together, in fact as well as in theory, we can help each cerebral palsied child to reach the fullest measure of personal development commensurate with his capabilities.

SCHOOL PROGRAMS FOR CEREBRAL PALSID CHILDREN

MRS. BEATRICE GORE and JANE STODDARD, *Consultants, Education of Physically Handicapped Children, Bureau of Special Education, California State Department of Education*

Butch, a cerebral palsied child, could not sit erect without support nor could he feed himself. He had never stood, even with support. And his speech was limited to a few words. Butch rode in a wheel chair when he entered school. He had never before attended any type of school nor been with children his age. The only time he had ever left his home was when his parents had taken him in their car or pushed him about the neighborhood in his wheel chair. Some of the neighbors did not understand Butch's condition and it was not very pleasant to hear their remarks or watch the expressions on their faces as he and his mother went on their daily errands. Butch's condition resulted from a birth injury. Because of this injury, he had been under the constant care of doctors. The doctors had told Butch's mother that he would require special help and attention all his life. Butch had received special therapy. But he had never attended school, for there were no classes in the school district in which children in his condition could receive the attention and educational opportunities they needed.

One day a doctor told Butch's mother that special classes for children with cerebral palsy had been opened in a school district not far away. In a desperate hope that Butch might be able to attend school, the family sold their home and moved to the school district in which the special classes were conducted. Soon after they were located in their new home, Butch's parents called on the superintendent of schools and made application for his admission to the special class. Butch attended the cerebral palsy clinic which was held regularly at the school. He and his mother met the principal, the therapists, and members of the regular school staff. A psychologist came to Butch's home and gave him a psychological examination. Butch's parents attended the study group for parents and friends of cerebral palsied children. A committee of five people discussed Butch's condition thoroughly. Since he was severely handicapped, the committee questioned whether he would be able to profit by the school activities. But it was decided that he should be admitted to the school

on a trial basis. The happiest days in the life of Butch and his family resulted from that decision.

The day Butch started to school, his mother took him to the principal's office. After a brief conference, they were taken to the classroom. Butch's face became radiant as he saw the other children, and he looked eagerly about the room, observing the activities of the various groups. Thirteen other children were in the class. Most of them were younger than Butch, but he did not mind, because he was little and had not been with children before. He was not able to enter into many of the activities, but he enjoyed watching and listening. The children listened to stories told by the teacher and told stories to the teacher which she recorded on charts. They worked with blocks and transportation toys. They rearranged their playhouse and put some new furniture into it. Some of the children painted with calcimine and others did finger painting. The teacher helped Butch with finger painting, and he was told he could take his first picture home to his father. A few children were taken to other rooms for therapy—physical, occupational, or speech. All the children had a warm lunch followed by a good rest on cots. They also played outdoors and worked in the school garden.

Even though Butch had seldom been away from his mother, he was so busy watching the activities of the other children and getting acquainted with them that he did not seem to miss her. On the way home, he seemed a little afraid of the taxi, but the driver was jolly and kind and the other children in the taxi were considerate, so Butch was all smiles when he arrived home with his picture for Daddy.

In the days and weeks that followed, Butch and his family learned many things about school, especially about the special classes for cerebral palsied children. They learned that he went to Lexington School with four hundred other children. Three classes in the school were "special," because only children who had cerebral palsy attended them. Butch knew he was different from the children in his neighborhood, and it made him feel better to see other children who also were a little different. It reassured him to see them improve, and to realize that all of the children in school were his friends.

Butch was more seriously handicapped than most of the children in school. Since he was very small and had never been with other children, Butch was placed with the youngest group of children when he first entered school. He soon became acquainted with the therapists who worked with the cerebral palsied children. In a few weeks, the matron

who helped Butch's teacher was able to place him at a standing table for an hour each day. He had never stood, and this was an exciting and exhausting experience. Through the occupational therapist's help he was learning better ways of chewing his food, and was beginning to use a spoon. He also had begun to hold a large paint brush and crayon, and through the speech therapist's help his formation of sounds had improved sufficiently that he could make a few words intelligible to the teachers.

Butch was later transferred to another class. Older children were in this class and some of them were reading. Others were doing work similar to that of children in the first grade. Some of them were too handicapped to do all the work, but they were able to follow the general class routine and to watch and listen to the other children as they worked.

Mr. and Mrs. Smith, Butch's father and mother, came monthly to a parent study group for all parents whose children had cerebral palsy. The children of some of the parents were not yet in school. Some of the children were attending regular classes and came after school for physical therapy. In the study groups it was frequently stressed that the very early years are vitally important in working with cerebral palsied children, that with proper attention and assistance many cerebral palsied children would probably be able to attend regular classes by the time they were ready to enter the first or the second grade, and that without therapy and school work during their early years they might never be able to attend regular classes.

Butch's mother had frequent conferences with each therapist and with the teacher and was extremely co-operative in following their suggestions. Because the teachers, therapists, and parents were able to work together closely, the progress that Butch made was even more satisfactory than had been anticipated.

THE PROGRAM FOR CEREBRAL PALSY CHILDREN IN CALIFORNIA

Not many years ago it was quite generally believed that cerebral palsied children were permanently incapacitated in both body and mind. Unfortunately, there were then only a few doctors who understood the diagnosis and treatment of cerebral palsy and only an exceedingly small number of schools that offered any educational opportunity for cerebral palsied children. A few such children were provided some educational services by home teachers. But the only educational opportunities that

most of them had were those that their parents could offer at home. In recent years considerable progress has been made in bringing about measures to correct these undesirable conditions.

At the present time, when one reads or hears about or visits special classes for cerebral palsied children, many questions pertaining to their establishment, operation, and financing are certain to arise. Such classes as the one Butch attends result from extensive planning. Their operation requires the services of specially trained personnel. And the cost of operating them is far in excess of the cost of operating regular classes.

In California considerable progress has been made in recent years toward providing cerebral palsied children the health services and educational opportunities that they need. The State has established two residential schools which are a part of the school system of the state except that they derive no revenue from the State School Fund. The purpose of these schools is to diagnose the handicaps and determine the treatment of cerebral palsied children and to provide the education they need. The schools are known as the School for Cerebral Palsied Children, Northern California, and the School for Cerebral Palsied Children, Southern California. Provision has also been made for school districts and county superintendents of schools to establish and maintain special classes for the education of cerebral palsied children. These classes are operated in conformity with standards that are set by the State Board of Education. School districts and county superintendents operating such classes are reimbursed from state funds for the excess expenses involved, in amounts up to \$400 per unit of average daily attendance.¹ And they are reimbursed for the costs of transporting cerebral palsied children to and from the special classes, in amounts not to exceed \$350 per unit of average daily attendance.²

HOW SPECIAL CLASSES FOR CEREBRAL PALSID CHILDREN ARE ORGANIZED

Although school districts must provide special education for cerebral palsied children, each school district may choose to make the provision in one of several approved ways. Special classes may be organized by a school district. A contractual agreement to provide the special education needed may be made with another school district in the same county. If no school district in the same county offers classes for cerebral palsied children, a contractual agreement for such services may be made with

¹ Education Code Section 7101.

² *Ibid.*, Section 7018.1.

a school district in another county. The school district may take advantage of special classes operated by the county superintendent of schools, or if necessary the school district may contract with the superintendent of schools of another county for such services as are needed. The governing board of each school district may choose to make the special provisions which in its judgment are necessary for the education of the cerebral palsied children living within the district. Descriptions follow of two ways in which such provisions have been made.

THE STORY OF LEXINGTON CEREBRAL PALSY SCHOOL

During 1947 the El Monte Elementary School District began planning special classes for cerebral palsied children. In the preliminary phases of this activity several problems arose. Among these problems were those of meeting standards established by the state for such classes, securing from the State Department of Public Health the services of a therapist, and operating the classes on an efficient economic basis. In the search for solutions to these problems, it became apparent that the best solutions could be formulated if the several school districts in the immediate area joined together in planning. Within an area of ten square miles there were 15 school districts other than the El Monte Elementary School District that were interested in the project and active in its operation. As a result of this co-operation, interdistrict agreements were soon worked out whereby the El Monte Elementary School District contracted with each of these 15 districts to provide special classes for the cerebral palsied children living within the school districts. The Lexington Cerebral Palsy School in the El Monte Elementary School District was opened in September, 1948. On the opening day, two classes began operation with a total enrollment of 32 cerebral palsied children.

Admission to the special classes. A detailed and rather exacting procedure is followed in admitting pupils to the special classes. When the classes were first organized, a committee on admissions was appointed. The committee is composed of representatives from the entire area included in this cerebral palsy program. Members of the committee are chosen from the fields of administration, curriculum, health, research, and guidance so that all aspects of the program are represented. The committee develops policies and procedures for admission to cerebral palsy classes, as well as for transfer and dismissal. The policies and procedures adopted have been published in a handbook and made available to school personnel and parents in the area.

The committee may recommend the admission, transfer or dismissal of any pupil. The first official contact made by the parents of a cerebral palsied child is with the superintendent in the school district in which they reside. This superintendent helps the parents complete an application for their child's admission to the special classes. After the application has been completed, the child is given a physical examination by the medical consultant from the State Cerebral Palsy Diagnostic and Treatment Center, or by a physician assigned by the Crippled Children's Services of the State Department of Public Health. If this diagnosis reveals that he has cerebral palsy, a psychological study is then made of the child. His educational record, if any, is examined. On the basis of these investigations, the committee determines whether the child seems to be eligible for the classes. If the decision is favorable, the child is admitted to the special classes on a trial basis. If, however, there is no room in the special classes, the child is placed on a waiting list.

A child such as Butch, who cannot feed himself, is not denied the privilege of attending school. But the ability of the staff to feed and care for such a child may determine whether he will be admitted to the special classes.

As the close of the school year, the committee on admissions and dismissals studies the record of each child carefully and makes a recommendation regarding his placement for the next year. Each recommendation is mailed to the child's parents by the superintendent of the school district in which the child resides.

When a child is transferred to a regular school or dismissed because it is felt that he has not profited from his school experience, the committee again makes a careful study of recent physical and psychological examinations and reports of therapists and teachers. When a child is dismissed it is the responsibility of the superintendent of the school district in which the child resides to inform his parents and to make other arrangements for the child.

Staff employed for the special classes. Three teachers are employed to instruct the special classes for cerebral palsied children. Matrons, one assigned to each class, help the seriously handicapped children move about the room, to and from toilet and therapy rooms and the playground. They also serve fruit juice in mid-morning and the hot lunches that are delivered in steam containers from the regular school cafeteria. The matrons assist therapists in adjusting braces, placing children at standing tables, and the like. They also help with feeding children who cannot

feed themselves. They meet the taxis used to transport the children to and from school, and get the children ready for the taxis.

The curriculum employed in the special classes. The curriculum for the special classes is closely correlated with that of the regular classes. Certain problems arise in making this provision because there is a wide range of age and ability within each class and because cerebral palsied children may remain in one room for several years. Physical handicaps vary with each child and adjustments to these handicaps must be made with the teacher's help. With such variations and adjustments as are necessary, however, the school program is comparable to that of the work of regular classes. The very young children follow a regular nursery-school program, with carefully planned educational objectives. While some children participate in a kindergarten-type program, others take part in reading-readiness activities and reading such as might be found in first and second grades. The activities for the more mature children are geared to their abilities and needs.

Evaluation of the children's progress. No formal grades are given children in the special classes, but each child's work is evaluated at regular intervals. These evaluations reflect the child's growth in relation to his ability. The parents of each child are encouraged to participate in making the evaluations of the child's growth and development as a person. Much of this work is done in parent-teacher, parent-doctor, parent-therapist, and parent-teacher-doctor-therapist conferences. Summaries of these conferences are filed for future reference.

Location of the special classes. An old building located on the grounds of a school in the El Monte district was remodeled to provide the amount and type of space that was necessary for the special classes. When the classes were begun there were two classrooms, a physical therapy room, and a small room for occupational and speech therapy. During the next two years the enrollment grew so rapidly that it was necessary to complete two more classrooms. These rooms were put into service in the fall of 1950. At present three classrooms are in use and three rooms are being used for physical, occupational, and speech therapy. In addition to these rooms, an asphalt-surfaced area and a large porch with concrete floor afford space for outdoor work. Adjoining are a yard for pets and a plot for a school garden. The playground is specially equipped for the more seriously handicapped children. Those less handicapped are encouraged to use the playground provided for the regular school.

The equipment used in special classes. Considerable equipment is required in maintaining an adequate program for cerebral palsied children. Each classroom must be equipped with tables at which the children can work while standing and others at which they can work while sitting. And the chairs that are provided for use in the classroom must be designed to meet the children's particular needs. The therapy room must be equipped with special tables, mirrors, walking bars, stools, steps, and any other equipment that is needed to help a particular child. Much of the equipment used in Lexington Cerebral Palsy School has been made by the custodial staff. In general it conforms to specifications that were drawn up by the Bureau of Special Education of the State Department of Education, the school doctor, and the physical therapist. In certain cases, however, pieces of equipment have been designed to meet a particular child's needs. The specifications for each piece of this equipment were drawn up by a doctor or the school therapist.

Transportation to the special classes. Each child enrolled in the special classes is transported to school by taxi. This means of transportation has proved satisfactory because the area served by the special classes in El Monte Elementary School District is comparatively small.

THE STORY OF CHANDLER TRIPP SCHOOL

The Chandler Tripp School for cerebral palsied children is operated by the Santa Clara County Superintendent of Schools. This school is housed in a building that is specially designed for the education of cerebral palsied children. The building site was made available by the governing board of the San Jose Unified School District. Funds for the building were made available through the county school service fund and from a special legislative appropriation.

This school for cerebral palsied children came into existence in 1948 after years of organized effort and of practical planning by persons from many technical fields. The first class was conducted in a building on the grounds of the Morse Street Elementary School. Use of the building was secured by parents working in co-operation with the County Crippled Children's Society. The Society paid the rent and the cost of constructing ramps which were necessary for pupils in wheel chairs. The county superintendent of schools purchased the basic educational equipment needed and provided the services of a teacher who had specialized training in the cerebral palsy program.

The director of guidance from the office of the county superintendent of schools was given responsibility for organization of the special class. Parents of the cerebral palsied youngsters provided transportation for the children to and from school, and the County Crippled Children's Society took an active part in purchasing much of the special equipment that was needed for therapy purposes, some of which was constructed by a local planing mill from plans supplied by the State Department of Public Health. This equipment included "tailor-made" tables and chairs for the children, also items such as a "stander-upper," "relaxation chairs," "crab crutches," standing tables, and wheel chairs.

Consultants in the education of physically handicapped children from the State Department of Education and other specialists from the State Department of Public Health made their services available. Part-time services of a physical therapist were supplied by the Department of Public Health.

A class of six boys and two girls began activities on Monday, April 26, 1948. The age range of this first group was from eight to sixteen years. Five of the boys had never attended school. The opportunities the children had enjoyed previously were extremely limited.

Enrollment of the special class increased rapidly. The number of pupils rose to 21 the second year. This required the services of two teachers and two matrons and the rearrangement of available space to provide two classrooms. In order to do this, a local carpenters' union built a partition of lumber donated by a local lumber dealer. At about the same time, the Shrine Club provided a station wagon for the transportation of children to and from school; a piano was contributed by several women's groups working co-operatively, and a record player by the Association for Childhood Education. A newspaper notice regarding need for wheel chairs and tricycles brought about the donation of several of each by interested citizens. Playground equipment was furnished by various community organizations. The full-time services of a resident therapist had already been made possible early in the first year.

The new building planned in consultation with experts in the several fields of treatment needed by cerebral palsied children and completed in September, 1949, embodied most of the needed facilities and conveniences. Three classrooms, a large physical therapy room, and considerable space for the occupational therapist were provided. Since a special therapist has been employed, there is need for an additional room. The nur-

sery-school and kindergarten groups use the same room, one group using it in the morning, the other in the afternoon.

A nursery class was begun when the new school opened. In September, 1950, a kindergarten group was organized and a speech correctionist was employed on a full-time basis. An outdoor play and work area was provided as an extension of the kindergarten and nursery-school classrooms. Play equipment was selected after observation and study of children's spontaneous use of various pieces of equipment during experimental excursions to public parks and playgrounds.

Summer recreation for all physically handicapped children is offered during July and August by the Crippled Children's Society. The school building and play equipment are used in the program. Trained leadership and transportation are provided. During the first summer, approximately 55 children were served, and 65 the second summer. During the third summer, the regular physical and occupational therapists at the new Chandler Tripp School continued their work with the cerebral palsied children, while the Crippled Children's Society carried on its usual summer recreation program for all types of crippled children. The Society also sent a considerable number of such children to camps, and during the school year provided excursions and holiday treats for them.

Growth of the school. The outline that follows makes apparent the growth of the Chandler Tripp School from its beginning at the Morse Street School to its new building.

- First Year: April, 1948, to June, 1948. *Morse Street School.*
Eight children, one teacher, one matron.
- Second Year: September, 1948, to June, 1949. *Morse Street Shool.*
Twenty-one children, two teachers, two matrons, one physical therapist.
- Third Year: September, 1949, to June, 1950. *Chandler Tripp School.*
Thirty-two children, three teachers, three therapists, one speech specialist, part time.
- Fourth Year: September, 1950, to June, 1951. *Chandler Tripp School.*
Forty-five children, four teachers, three matrons, four therapists, one speech specialist.

Organization plan. The Chandler Tripp School is operated by the county superintendent of schools of Santa Clara County. Responsibilities of the various staff members are as follows:

1. The county superintendent of schools assumes basic responsibility for planning, financing, and administration
2. The director of guidance has responsibility for the educational organization of the school
3. A general supervisor, specialized in primary education, acts as advisor in curriculum and instruction
4. A psychologist aids in pupil selection, makes special studies as indicated, and checks the children's progress
5. Specialists serve as consultants in their respective fields: industrial arts, visual aids, home economics, music, art, playground

Child study procedures used. The child study procedures employed in Chandler Tripp School are indicated in the outline that follows:

1. Screening clinics are held when needed to study cases referred by public health nurses. Personnel: orthopedist; public health nurse through whom case is referred; pediatrician; matron.
2. Clinics are held as needed to determine the trainability or educability of cerebral palsied children referred by the screening clinic and to determine the education each child should be given. Personnel: orthopedist, educator; physical therapist; occupational therapist. Children are admitted to the school if approved by this clinic, providing room is available. Otherwise they are placed on the waiting list.
3. Conferences are held biweekly for study of students at the school, to check progress and to arrange for change of plan if need is indicated. Personnel: director of guidance; psychologist; curriculum advisor; orthopedist; teachers; therapists; public health nurse; and a representative from the Crippled Children's Services. These conferences are held in the school building.

Instructional goals and unique features of the program. In planning the program for cerebral palsied children certain basic considerations were kept in mind. These considerations are presented in the statements that follow:

1. The education of the cerebral palsied child should, so far as possible, be such that he will become personally adjusted, socially useful, and economically effective.
2. The educational needs of the cerebral palsied child are similar to those of the normal child. Therefore, the regular course of study should be followed as closely as possible, allowing for necessary variation in rate and sequence of presentation.

3. Each classroom teacher has the problem of working with a group of children of varying age, some with severe handicaps and some with but slight handicaps, some that will be quick to learn and others that will be slow to learn.
4. Children of varying interests and levels of ability and achievement can work together on central units that provide enriched experiences, develop initiative and independence in solving problems, and provide motivation.
5. Every effort must be made to provide therapists so as to assure the development of the whole child.

Among the unique problems arising in the instructional program for cerebral palsied children are the following:

1. The basic need for training in such simple skills in self-care as eating and dressing
2. The programming of each child's day to provide the various therapies, adequate community-classroom participation, and group experiences needed
3. Inadequacy of accepted and usable standards for the measurement of children's growth and development as persons
4. The transportation of children with severe physical handicaps to and from school

SPEECH CORRECTION IN THE PUBLIC SCHOOLS

MRS. AGNES M. FRYE, *Consultant in Speech Correction, Bureau of Special Education, California State Department of Education*¹

Through the pastel fabric of early childhood there frequently appears a red thread of danger—a threat to the fulfillment of the growth and development pattern of child personality. This thread may be so strong and so interwoven in the fabric that it will set the tone for the pattern and determine the quality of the personality. The presence or emergence of speech problems are threads of danger in the pattern of personality development. The correction of speech problems challenges the best efforts of all persons who are interested in helping children develop wholesome personalities.

Speech is the basic tool used by the child in making personal and social adjustments. It functions as an integral part of all learning experiences in the curriculum of a school. And it is a natural part of the child's process of living as well as an important integrating agent in his development as an individual.

Learning to talk is a socializing process. If a child is given good speech stimulation from the early years of his life he will be saved from many pitfalls into which he might stumble without this vital early assistance. Any such speech stimulation will help the child develop the ability to participate effectively in the life of the home, the school, and the community. As a result of inadequate speech development and education, it is estimated that approximately 10 to 12 per cent of the school population in the United States now needs special help in speech. This help may be provided through a well-planned and well-rounded program of speech correction.

In California, the objectives of the speech correction program are (1) to prevent the emergence of speech problems by the promotion of good speech development in early childhood, (2) to discover speech

¹ Assisted by Mrs. Alma Wedberg, Co-ordinator of Elementary and Secondary Speech Correction, Los Angeles County, and a special committee including Ruth Brace, Speech Teacher, Mt. Diablo Unified School District; Mrs. Georgia Cooper, Summer Session Instructor, University of California; Mrs. Cornelia Downing, Speech Correctionist, Fresno City Unified School District (and subcommittee); Joseph Howard, Consultant in Speech Correction, Stanislaus County (and subcommittee); Mrs. Marian Lutz, Speech Correctionist, San Jose Unified School District (and subcommittee); Mrs. Oma Miles, Speech Consultant, Fresno County (and subcommittee); and Louise Tantau, Co-ordinator of Speech Correction, Tulare County.

problems early, to determine, if possible, the causes of the problems, and to provide the corrective measures necessary to eliminate or to lessen each child's speech difficulty, and (3) to utilize all available resources for the welfare of speech-handicapped children.

In applying the philosophy underlying speech therapy or correction, especially with children of kindergarten-elementary school age, it is imperative that those concerned understand that speech is deeply imbedded in each child's personality and that the child's personality adjustments to others that result from oral communication are frequently made on a highly emotional basis. This is a natural result of the child's having first learned speech by associating it with objects, events, feelings, attitudes, and emotions in real life situations rather than having learned it through instruction. Although it is important to treat the speech problem, attention must also be given to helping the child-personality become aware of good speech and its values and to developing the child's desire to speak well in reading aloud, in reciting, and in talking with others. It is obvious, therefore, that speech correction services must reach beyond the speech clinic and that they must be furthered through close co-operation among correctionists, classroom teachers, school supervisors and administrators, parents, and the services and agencies concerned with the welfare of children.

TYPES OF SPEECH PROBLEMS

The speech problems that are encountered in the public school program involve defective articulation and emotional disturbances. Defective articulation may be organic or functional in nature. Approximately 10 per cent of all speech and voice problems are caused by organic deficiencies or deviations. These may result from unusual conditions of the teeth, nasal obstructions, cleft palate, tongue-tie, cerebral palsy, tonsil obstruction, hearing deficiencies, aphasia, laryngeal complications, or mental deficiencies. Approximately 90 per cent of all problems of speech or voice are considered to be functional in nature. They include infantile speech, (lisping and other sound substitutions, insertions, omissions, and distortions, often termed baby talk), persisting foreign dialect, stuttering, and allied problems. Delayed or retarded speech, especially with young children, often defies diagnosis since it may be either organic or functional in nature, or a combination of both. If functional, it may be due to environmental causes such as overprotection or rejection by parents or to inadequate opportunity for communication with other chil-

dren or with adults. It may also be due to the effects of long and severe illness or emotional shock at the time the child was beginning to use oral expression. In California, many children live in homes in which only a foreign language is spoken or the language that is spoken is very poor according to accepted American speech standards.* Since this is especially true of children of Mexican descent, many of them are retarded in speech development. Teachers of Mexican-American children should, therefore, be especially skilled in the use of teaching techniques that may be employed to emphasize speech and language development. In helping Mexican-American children develop American language facility, a step is also taken toward helping them solve their social and educational problems, particularly if the understanding and co-operation of their parents are achieved.

The child with a speech problem that seems to be organic in nature should be referred to a speech correctionist. The correctionist will provide the necessary attention and instruction after having obtained from a physician a full diagnosis of the case and his recommendations for treatment. There are many functional speech problems, however, including those that result from emotional disturbances, which classroom teachers working with speech correctionists can help to correct. Many of these problems involve voice control, including volume, pitch, resonance, and inflection.

Stuttering is one of the most difficult speech problems that is encountered by speech correctionists. Temporary relief from stuttering may be obtained through exercises that attract the child's attention to something other than his speech problem. This may be accomplished through such mediums as speech drills, rhythmic drills and relaxation of superficial musculature. Such relief should not be confused with correction. Complete and permanent freedom from stuttering can seldom be secured by mere treatment of the symptom.

Like nail biting, excessive thumb sucking, enuresis, or vomiting certain foods, each of which has psychological involvement, stuttering is a symptom which indicates that some situation has aroused emotional anxiety in the child. To treat stuttering effectively, it is first necessary to study with the child's parents and teacher the underlying causes for his feelings of inadequacy, insecurity, and emotional conflict. When these causes are discovered and removed, the stuttering may stop without anything overt having been done about the speech symptom.

* Accepted speech standards of the United States, rather than of other English-speaking countries in the Western Hemisphere or the British Commonwealth.

A SURVEY PROVIDES A BASIS FOR ESTABLISHING A SPEECH CORRECTION PROGRAM

A survey of the school population serves the threefold purpose of (1) locating each child who needs help and identifying his speech needs; (2) informing each child's parents and teacher of his speech needs; and (3) informing educators and other members of the community of the extent to which need exists for a program of speech correction. The survey that is made for this purpose may be conducted in a number of different ways.

In certain counties in California, a preliminary survey is made by having each teacher report to the office of the county superintendent of schools the children in his classes who have speech problems. Following this preliminary survey, each child reported is examined to determine the exact nature of his problem. These tests are frequently administered by consultants in speech correction from the Bureau of Special Education, State Department of Education. The results of the tests are then used as a basis for recommending the program of speech correction that should be established. In some instances, the consultants conduct a clinic for the severe cases discovered, to which parents, school nurses, teachers, administrators, and representatives of allied services are invited. In other counties and in some large school districts a speech correctionist or several speech correctionists working with teachers conduct the survey. The necessary testing is done by the correctionists, but through participation in the survey the teachers gain considerable insight into the problems that are involved in setting up a program of speech correction. This usually results in increased teacher interest, understanding, and co-operation in making the speech correction program effective.

FINANCING THE PROGRAM OF SPEECH CORRECTION

School districts and county superintendents of schools providing speech correction services to pupils with speech defects are reimbursed from State funds for the excess cost of current expenses in providing such services, in amounts up to \$400 per unit of average daily attendance. Speech correctionists use separate State School Registers to record the attendance of pupils in remedial classes. They record actual minutes of attendance, and the monthly column totals on the registers are converted into days of attendance by dividing by the number of minutes which constitutes an apportionment day for the grade level of the pupils for whom minutes of attendance have been recorded—180 minutes for

kindergarten pupils, 200 minutes for pupils in grades one to three, or 240 minutes for pupils above grade three. In computing days of attendance for pupils given *individual* instruction on a remedial basis, 60 minutes constitutes an apportionment day, regardless of the grade group of the pupils so instructed. Average daily attendance of all the pupils given remedial speech instruction is computed by dividing the total number of days of attendance by the number of days school was taught in the regular day schools of the district. If instruction is furnished by a county superintendent of schools, this divisor is 170.

Excess cost provisions are designed to make possible special instruction to "physically handicapped pupils" who because of their handicap cannot profit fully from regular classroom instruction. Consequently, time spent in receiving such instruction is the basis on which excess cost payments are made. However, in a well-rounded program for speech-handicapped children, the speech correctionist performs duties other than special teaching. The correctionist is a consultant to regular class teachers and other school personnel on matters relating to speech, a co-ordinator of speech instruction programs in all of the schools which are served, and a public relations representative. School administrators and boards of education who appreciate the value of this comprehensive type of service arrange to pay the cost of this necessary implementation of the program which cannot be reimbursed by state excess cost payments.

ORGANIZATION OF THE PROGRAM OF SPEECH CORRECTION

Speech correction programs in California schools are conducted by special teachers who are speech correctionists. These special teachers go from school to school within a local school district, or between schools in adjacent districts if two or more school districts share their services.

In counties in which several speech correctionists are employed, either by individual school districts or by the county superintendent of schools, it may be necessary for the county superintendent of schools to employ an additional experienced speech correctionist to serve as a co-ordinator or supervisor of speech correction and allied services in the county.

In certain counties and communities in which speech correction and hearing conservation programs have recently been introduced, a consultant or co-ordinator trained in the fields of hearing and speech is employed to assist in the development of services to aurally handicapped and speech-handicapped pupils. This arrangement is proving to be very

satisfactory where the school population is comparatively small. Some school districts that have started such programs are offering salary differentials for speech correctionists who are also qualified to conduct audiometric testing and to teach lip reading to hard-of-hearing children. In a few areas, particularly those with large school enrollments, a director for all special services is employed. It is important that such directors have specialized training in as many of the fields of education for exceptional children as possible.

Children who need special help in solving speech problems should be grouped into small classes. These classes should be scheduled to meet once or twice weekly. They should be taught by a speech correctionist. All instruction should be planned and co-ordinated to help the children correct their speech defects.

Speech correction classes should be scheduled so as to cause a minimum of interference with regular classes. They should be held in rooms that are as free as possible from noises. The standard equipment that is generally used by speech correctionists should be available. This will include a tape recorder, a large mirror, books, games, toys, crayons, newsprint, paints, tongue depressors, swabs, and soft tissue.

CO-OPERATION OF SPEECH CORRECTIONISTS AND CLASSROOM TEACHERS

The speech teacher and the classroom teacher have a considerable common background pertaining to the education of children, since the correctionist in California schools must possess a valid California teacher's certificate, credential, or life diploma of elementary or secondary school grade in addition to a special secondary credential in correction of speech defects. This background provides a basis upon which correctionists and teachers can work co-operatively in helping all children to develop good speech and in helping children who have speech problems to make permanent corrections.

In the re-education procedures that are employed with speech-handicapped children, emphases are placed upon clear enunciation, voice resonance and projection, rhythm and timing in the flow of speech, phonetics, improved expression, and oral reading. Attention is given to the correction of speech in which sounds are omitted, inserted, substituted, or distorted. The exercises employed for these purposes make provision for children to perceive likenesses and differences in sounds, to produce sounds accurately and use them correctly. Although these exercises are especially suited to the needs of children with speech prob-

lems, they are of the nature that will help all children develop good speech.

Children with speech problems should be sent to the speech correctionist to receive therapy in solving their problems. Such instruction is, however, seldom adequate to effect complete correction. This is especially true when the instruction is given to children in the kindergarten-primary and intermediate grades. As soon as these children gain insight into the techniques of correcting their speech defects, the correctionist should then help the regular classroom teachers provide the opportunities and additional assistance that the children need to establish these corrections in everyday speech. In providing additional practice for speech-handicapped children, the teacher can make available to all children in the class opportunities to develop good speech habits. And through group participation, children with speech problems can be given opportunities to practice correct speech in normal learning situations.

The state bulletin, *Speech Correction in the Elementary School*,² which is available through the Bureau of Textbooks and Publications, State Department of Education, presents an analysis of speech sounds that will prove valuable to informed teachers who are helping children develop good speech, especially if used with the guidance of a correctionist. In addition to presenting a speech analysis, this bulletin also suggests activities that may be employed to further children's ability to speak correctly. It is actually a manual for speech improvement.

IN-SERVICE EDUCATION IN SPEECH CORRECTION

State consultants in speech correction and local speech correctionists should conduct institutes and workshops for classroom teachers to help them understand techniques of speech development, techniques that can be used to correct minor speech defects, and means whereby speech may be integrated in the curriculum. There should also be provision in these workshops for teachers to acquire information regarding the different means they can employ to help children and adults acquire clear and deep insights into the importance of speech education and speech correction. And in these workshops there should be provision for teachers to become aware of the importance of their use of correct speech when they are instructing children in any phase of school work.

By working together in classroom situations, the speech correctionist and teacher can develop methods of speech development and correction

² Mabel F. Gifford, *Speech Correction in the Elementary School*, Bulletin of the California State Department of Education, Vol. XVII, No. 1, March, 1948.

that each of them can use to improve their work with children. For example, in giving a demonstration lesson in how children may be helped to relax, the correctionist will utilize many techniques that may be used by the teacher in regular classes. And in giving the demonstration in a regular classroom, the correctionist will learn something about the problems that the teacher will have to handle while employing the techniques that she learns. Through watching the demonstration, the teacher may discover some new techniques of instruction that she has not previously understood but is anxious to use with the children in her classroom. And there is a possibility that the teacher will be able to make some worthwhile suggestions to the correctionist of ways she has found helpful in getting children to relax. Free discussion between the correctionist and the teacher can prove helpful to both. And as a result of such discussion, their work in speech may become closely correlated.

RECRUITMENT AND EDUCATION OF SPEECH CORRECTION TEACHERS

There is a growing need for teachers who are qualified to correct speech problems. Speech correctionists serving California school districts that have large enrollments report that their case loads have increased rapidly during the past two years. These increases have resulted from more thorough screening of school enrollments than was used previously to discover children with speech problems and from an increase of children who have moved into California from states in which they were given little or no speech correction in the public schools. As a result of these increases, there is a growing need for speech correctionists.

Approximately 250 full-time and some part-time speech correctionists are now engaged in speech correction work in the California public schools. Each must hold a valid California teacher's certificate, credential, or life diploma of elementary or secondary school grade in addition to a special secondary credential in correction of speech defects. To qualify for the special credential, each must have two years of successful teaching experience, or must complete four semester hours of superior directed teaching in an approved teacher-education institution. The correctionist must have had a minimum of 12 semester hours of special work including technique of normal speech, mental hygiene, speech defects and disorders, speech correction, directed teaching in speech correction, and problems in the teaching of speech correction. Further, the correctionist should possess personal characteristics that indicate probable success in

teaching handicapped children.³ Recruitment and education of teachers who are personally fitted to work with speech handicapped children are problems of primary importance. The superintendents of some school districts are attempting to solve these problems by encouraging regular teachers who are interested in speech correction to qualify for the special secondary credential in correction of speech defects. In order to encourage more students and teachers to qualify for such work, scholarships are being made available to those who become interested in speech correction. Scholarships should also be made available for speech correctionists who desire to take additional preparation to become better qualified for service to children who have serious speech problems.

Thirteen California state colleges and universities are providing preparation leading to the special secondary credential in correction of speech defects. Several others provide partial preparation.

Many credentialed correctionists, speech and hearing specialists, college instructors in speech and hearing education, students preparing for the work, and interested teachers are members of the California Speech Therapy Association. This organization includes state speech correction consultants for advisory service, and co-operates with the Bureau of Special Education through regional and state committees.

TEAMWORK APPROACH TO SPEECH CORRECTION

Close teamwork of speech correctionists, classroom teachers, guidance and health services, and parents of children with speech problems will strengthen the program of speech correction. This teamwork can be developed through procedures that have been tried and proved effective. In a number of communities, classes planned for parent education have been encouraged and promoted by consultants in speech correction from the Bureau of Special Education, State Department of Education, working in co-operation with speech correctionists and classroom teachers. Talks, interviews, and round-table discussions pertaining to speech correction have been broadcast over local radio stations. Recently, demonstrations of speech correction with children have been shown in connection with "Operation Education" programs and others on television. Increasingly, demonstration lessons in speech correction have been presented in schools with parents and classroom teachers present. Opportunities have been utilized to present to service clubs and other community groups information pertaining to speech correction. The press has been

³ California Administrative Code, Title 5, Education, Section 356.

provided with news items regarding interesting developments in the speech correction program. Conferences between speech correctionists, classroom teachers, and parents whose children have speech problems have been encouraged. And every opportunity has been taken to utilize the co-operation of local parent-teacher associations. In communities in which activities of this type have been developed, there is close teamwork among speech correctionists, classroom teachers, guidance and health services, and the parents of children who have speech problems. As a result of this teamwork, these communities have strong speech correction programs.

STUDIES IN THE EDUCATION OF GIFTED CHILDREN¹

ELISE H. MARTENS, formerly Chief, *Exceptional Children and Youth*,
Office of Education

Interest in providing better education for gifted and talented youth has been aroused anew in the past few years. National emergencies make us realize how much the world needs the abilities of these young people to be used in the service of world civilization and progress.

Creation of the National Science Foundation by Act of Congress was heralded as an outstanding event of 1950. A volume on *The Gifted Child*, released in 1951 by the American Association for Gifted Children, considers the progress that has been made and the problems that must be solved in the education of intellectually brilliant and specially talented young people.² A pronouncement of the Educational Policies Commission of the National Education Association on *Education of the Gifted*, published in 1950, is of added significance in presenting the philosophy that should govern educational practice.³ The 1950 Yearbook (Part II) of the National Society for the Study of Education, entitled *The Education of Exceptional Children*, includes an important chapter on the gifted child that summarizes significant research and educational programs.⁴ All these publications, besides numerous articles in periodicals, coming within the period of one short year, tell us in no uncertain terms that it is high time the schools were taking another look at the whole problem of educating gifted children.

And the schools are doing just that. From East to West one hears of studies that are being made, of projects under way, of experiments being carried on—all directed toward the improvement of our educational programs for children and young people who are far above average in general intellectual ability or who have special talents in some creative field, as in art, music, dramatics. Though this is considered the century of the common man, "if we are to have leadership in government, in

¹ An address delivered at the Annual Convention of the California State Chapter of the International Council for Exceptional Children, April 19, 1952, at Joseph C. Laney Trade and Technical Institute, Oakland, California.

² *The Gifted Child*, edited by P. A. Witty for the American Association for Gifted Children. Boston 16: D. C. Heath & Co., 1951.

³ Educational Policies Commission, *Education of the Gifted*. Washington 6: National Education Association, 1950.

⁴ *Education of Exceptional Children*, Part II, Forty-ninth Yearbook of the National Society for the Study of Education. Prepared by the Society's Committee and edited by N. B. Henry. Chicago 37: University of Chicago Press, 1950.

science, in education, in the professions, and in the home, we must find and train some *uncommon* men and women."⁵

In 1951, San Francisco State College offered during its summer session the first full-time workshop on record in the education of gifted children. So successful was the project and so challenging the interest it aroused over the state that a similar workshop will be offered in 1952. Teachers and administrators are already applying for admission, which is to be limited. Some of those interested in enrolling are carrying on new projects in their own school systems. San Diego public schools, for example, have recently assigned a teacher-consultant to help teachers in selected elementary schools to understand better the needs of gifted youngsters and to make the school program meet those needs more effectively. Modesto is carrying on an "independent study" plan in its high school, through which intellectually exceptional eleventh- and twelfth-grade students are permitted to work two hours daily in "seminar" fashion on electives of their own choosing (some of them, such as higher mathematics, not even being in the regular high school curriculum), with an instructor in charge who gives individual attention as needed. Santa Barbara public schools have been carrying on a study, in co-operation with parents, of home and school situations as they affect gifted children and of the ways in which the schools can enrich the programs for these children with more dynamic results. Extension courses and workshops are being called for by city and rural schools here, there, and elsewhere, to consider what the schools should be doing about the problem. The California Congress of Parents and Teachers has sponsored a study that is being carried on through the University of California, Los Angeles, to find out what is being done for gifted children in selected areas.

These are a few of the evidences of activity in California. To get a glimpse of what is going on elsewhere, we need go only to our neighboring state to the north. The 1951 Legislature of the State of Oregon made an appropriation to carry on a study of gifted children in the state—where they are, what is being done for them, and what *should* be done for them. That study is now under way. Only this spring the city schools of Portland were given a substantial grant by one of the major foundations to carry on a study of gifted children and of the ways in which schools can better meet their needs. We could go northward and eastward from Oregon and note work that is being done in Saskatchewan, Canada, in Ohio, in Pennsylvania, in New York, in Massachusetts, in teacher-

⁵ *American Scientist*, XXXIV (1946), 436-37.

education institutions and in local school systems, through public funds and private grants—all expressing anew an effort to give to gifted and talented youngsters the equality of opportunity of which we boast so much in our American democracy. Vannevar Bush, in a recent book, said, "We are prone to emphasize equality of educational exposure and to lose sight of equality of educational opportunity."⁶ This has been all too true of our treatment of gifted and talented children, and recent developments indicate that educators, legislators, and the public are all trying to do something about it.

With this overview of what is going on in the country as a whole, let us turn to some of the focal points involved in the studies that are under way:

1. *Teachers are studying the ways and means of "enriching" the program for gifted children in regular classes.* What is this thing called "enrichment," anyway? This is one of the most important problems for investigation, for almost every teacher will at some time find a brilliant intellect or a special talent in the classroom that cries out for expression quite beyond the possibilities of most of the members of the class. A number of studies have recently been made to help teachers to find the way. The Philadelphia Suburban School Study Council, involving nine school districts, carried on a group project, the results of which were published in the February, 1950, issue of *The School Executive*.⁷ In our own state, Los Angeles public schools issued in 1951 a report on *The More Capable Learner in the Secondary School*, offering suggestive materials for use by the classroom teacher, the counselor, and the administrator.⁸ Every workshop on the gifted, every course given in this field, every institute session dealing with the gifted finds this problem of paramount importance because most teachers, if they are to do anything at all for gifted children, will need to use enrichment programs in regular classrooms. But such programs cannot be put up in neat little packages with prescriptions as to how they are to be used in a particular situation. The studies that are made can only be suggestive, and the more we have, the better. But every teacher and every teachers' group must apply the

⁶ Vannevar Bush, *Modern Arms and Free Men*. New York 20: Simon & Schuster, Inc., 1949.

⁷ William E. Arnold, "The Philadelphia Suburban School Study Council," *The School Executive*, February, 1950, p. 66.

⁸ "The More Capable Learner in the Secondary School," Secondary Curriculum Monograph, M-72, prepared by John D. Lawrence, Secondary Curriculum Co-ordinator, Chairman; Frances Hall Adams, Secondary Curriculum Co-ordinator; Claude E. Wilson, Research and Guidance Co-ordinator, assisted by workshop members. Los Angeles, California: Office of the Los Angeles County Superintendent of Schools, Division of Secondary Education, January, 1951 (mimeographed).

suggestions in local situations as the occasion demands. There is no formula that will fit every classroom or every child.

2. *School administrators are studying ways and means of providing for gifted children through some form of grouping.* Shall there be a special class, on a part-time or full-time basis? Shall there be special high schools for students particularly able in specific areas, as in science, music, or political science? Modesto's program represents the practice of part-time grouping. New York operates special high schools for special fields of interest. There are plenty of other examples of full-time or part-time grouping, and a number of studies have been made in the attempt to evaluate them, with divergent findings. Philosophical considerations seem to color them all, and there are usually uncontrolled variables that enter into the situation. Most investigators agree, however, that the grouping of gifted children should not result in an isolated class but should provide for their association with other children in some phases of the school curriculum, as well as in club work, in school assemblies, and on the playground. Such an arrangement makes it possible for gifted children to challenge one another's abilities while in the special group, but at the same time to rub shoulders with boys and girls of all levels of ability and all types of personalities. It takes all kinds of people to make up the community, and gifted children need to appreciate the abilities of others not like their own. The only way in which they can learn to do that is to have opportunities of working with others.

3. *Teacher-education institutions are studying the qualifications of successful teachers of gifted children and ways in which such qualifications can be developed through the teacher-education program.* One study made in an Eastern college emphasizes the need of giftedness in the teacher himself. Other investigators place greater emphasis upon personality and the ability to understand and appreciate giftedness in the child, with a concern for developing the child's potentialities, using all possible resources within the community, and making them contribute to the creative functioning of the child's abilities. To find gifted children, to stimulate them, to socialize their school experiences, and to arouse in them the spirit of service through their gifts—these are no small responsibilities. Teacher-education institutions have indeed a challenging task to prepare teachers for such a contribution in the schools.

4. *Communities are studying how they can best foster the special gifts of youngsters in the schools.* Art museums, music clubs, children's

theater guilds, libraries, generalized museums in many communities are offering guidance and instruction on Saturday or at stated hours during the school week to children from the nursery school up; and follow-up studies of the children participating indicate how worth while they are, as evidenced in the children's later accomplishment. The present project of the California Congress of Parents and Teachers is another evidence of community concern and willingness to undertake a study of the problem. When whole communities support the schools by supplementing their program with community activities and studies, one may expect the best results. In fact, *joint* projects of school *and* community will provide the most effective stimulus.

None of the studies to which reference has been made gives such comprehensive and conclusive evidence concerning desirable educational methods as that which we have from the Stanford studies regarding the characteristics and probable future development of gifted children. Those studies are in a class by themselves, and all the world is indebted to Dr. Lewis Terman and his co-workers, as well as to the agencies making the studies possible through financial grants. The follow-up is still in progress, the latest unit of the study now being made for the year 1950-51. While the primary purpose of the studies is not to evaluate educational programs and methods used with gifted children, the investigators feel justified in drawing certain general conclusions from their findings. They advocate the broadest possible school training, the greatest possible number of intellectual contacts, and a moderate amount of acceleration that would permit college entrance at the age of sixteen or seventeen for children having an intelligence quotient of 135 or higher. This is considered especially desirable for those who plan to complete two or more years of graduate study in preparation for a professional career.⁹

It is good to be able to cite so many different approaches to the study of the education of gifted children. Yet they are not nearly enough. Our provisions are still woefully inadequate; our study of the problem leaves much to be desired. As the college and university courses in the field multiply, as more and more local school systems undertake experimental projects suiting their own community needs, as voluntary organizations of citizens become interested, as financial foundations recognize the importance of sponsoring research projects on an extended scale, as state legislatures are willing to underwrite the extension of the educational program to provide for the gifted along with others who need special

⁹ Lewis M. Terman and Others, *Genetic Studies of Genius*, Vols. I-IV. Stanford, California: Stanford University Press, 1925-1947.

opportunities, and as the Federal Government sees its responsibility for the development of the creative abilities of gifted individuals for the benefit of the nation and the world—as these objectives are realized, one by one, we may confidently look for some of the results we all know we want. In the meantime, our job as teachers, as administrators, as citizens is to use the knowledge we have from the studies that have already been made to serve to the best of our ability our gifted children at home, at school, and in the community.

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